

AMSCO®

TEACHER RESOURCE

ADVANCED PLACEMENT® EDITION

HUMAN GEOGRAPHY



DAVID PALMER
Senior Consultant

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INTRODUCTION

This answer key is a supplement to *AMSCO® Advanced Placement® Edition Human Geography*. It identifies the best choice for each multiple-choice question, describes content that students might include in good responses to the free-response questions and the chapter essential questions, and gives answers for the thinking and writing features.

Each question is correlated to three elements of the *AP® Human Geography* Curriculum Articulation:

1. **Learning Objectives:** Learning Objectives from the AP® Human Geography Course and Exam Description (CED) are identified for each question, such as SPS-5.A or IMP-1.B.
2. **Course Skills:** The Skill Categories described in the CED (page 14) are also identified for each question, such as 1.B or Learning Objectives
3. **Textbook Pages:** The key for each question includes a list of specific textbook pages that can be used to support the answer. Not every page that may provide some background or context is included—just those that seem most relevant.

The key also lists, for each question, the most relevant pages in the student text for supporting the answer.

Justice and Race Feature A new series of justice and race features have been added to the AP® Human Geography Teacher Resource. They are designed to engender honest and even uncomfortable conversations and encourage all students to listen to and gain a better understanding of students of different races, ethnicities, and backgrounds.

Each feature has the resources needed and questions to promote critical thinking and facilitate thoughtful discussion among students. There is a section in the back of this Teacher Resource book with lesson plans and reproducible pages.

Following the answers and justice and race features is a correlation of the content of the student book to the elements of the *AP® Human Geography* Course and Exam Description that went into effect in the fall of 2020.

UNIT 1:

Thinking Geographically

CHAPTER 1 Maps and Geographic Data

TOPIC 1.1 Introduction to Maps

Mexico Map, p. 10

National capital, major cities, highways, and mountains.

It would be useful for general information about a place such as physical features, boundaries, or cities. Relative connectivity of cities and distance between cities via highways.

World Population Cartogram, p. 11

China, India, United States, and Indonesia.

Relative Location of Salt Lake City Map, p. 13

The interstate would make those locations easy to access for people and businesses. Trade would increase since goods could be transported along highways. Proximity near an interstate can reduce transportation time and costs.

See page 107 for a justice and race lesson plan related to Topic 1.1.

Reflect on the Essential Question: What information is presented in different types of maps, and how do those maps show spatial patterns, the power of geographic data, and relationships among places? p. 17

Types of Maps	Types of Information in Maps	Ways to Describe Spatial Patterns
<ul style="list-style-type: none"> ▪ Reference maps are aptly named because they are designed for people to refer to for general information about places. ▪ Thematic maps show spatial aspects of information or of a phenomenon. Following are descriptions of four common types of thematic maps. 	<ul style="list-style-type: none"> ▪ Political maps show and label human-created boundaries and designations. ▪ Physical maps show and label natural features. ▪ Road maps show and label highways, streets, and alleys. ▪ Plat maps show and label property lines and details of land ownership. ▪ Choropleth maps use various colors, shades of one color, or patterns to show the location and distribution of spatial data. ▪ Dot distribution maps show the specific location and distribution of something across the territory of the map. 	<ul style="list-style-type: none"> ▪ Absolute location is the precise spot of something. ▪ Relative location describes where something is in relation to other things. ▪ Direction describes things in relation to each other. ▪ Scale is the ratio between the size of things in the real world and the same things on the map. ▪ Absolute distance is measured in terms of feet, miles, meters or kilometers. ▪ Relative distance is nearness based on time or money and is dependent on the mode of travel. ▪ Elevation is the distance of features above sea level, measured in feet or meters. ▪ Clustered/agglomerated phenomena are in a concentrated area. ▪ Linear phenomena are in a straight line.

	<ul style="list-style-type: none"> ▪ Graduated symbol maps use symbols of different sizes to indicate different amounts of something. ▪ Isoline maps use lines that connect points of equal value to depict variations in the data across space 	<ul style="list-style-type: none"> ▪ Dispersed phenomena are spread out over a large area. ▪ Circular phenomena are equally spaced from a central point, forming a circle. ▪ Geometric phenomena are in a regular arrangement. ▪ Random or dispersed phenomena appear to have no order to their position.
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TOPIC 1.2 Geographic Data

Sources of Quantitative Data, p. 19

Strengths:

A map can show many places/spatial data points. A graph can show changes over time. A data table clearly organizes information. An infographic represents information in a visual manner.

Weaknesses:

A map can lack specific details at different scales. A graph might become confusing if too much information is presented. A data table does not present information in a visual manner. An infographic might lack the detail of the other representations.

Qualitative Data: Photo of Tokyo, p. 20

Qualitative data can provide global or local visuals to help understand a place. Also, qualitative sources can give different perspectives and opinions about a place compared to quantitative sources.

Reflect on the Essential Question: What are different methods of geographical data collection? p. 20

Individual Sources	Institutional Sources
<ul style="list-style-type: none"> ▪ Field observation is used to refer to the act of physically visiting a location, place, or region and recording, firsthand, information there. Information can include interviews, data points, or images. ▪ Smartphones or GPS devices are used by individuals to navigate and or gather geospatial data. ▪ Aerial photography includes professional images captured from planes within the atmosphere and is an important source of observed data available today. 	<ul style="list-style-type: none"> ▪ Government institutions are sources of data from governments or international organizations such as the United Nations. ▪ Mass media is the data, videos, or photos from news media outlets. ▪ Tech companies design apps for smartphones to use, gather, and sell locational data of users. ▪ Higher education research institutions conduct studies, gather data and write articles about spatial patterns and processes. ▪ Remote sensing gathers information from satellites that orbit the earth or other craft above the atmosphere. These sources are usually governmental but can be large corporate institutions.

TOPIC 1.3 The Power of Geographic Data

Water Pump in Africa Image, p. 23

Individuals in a community will understand the traditions and customs that must be preserved when solving problems. Also, community members will feel a sense of ownership and pride if they cooperate with experts to solve problems.

Reflect on the Essential Question: What are the geographical effects of decisions made using geographical information? p. 23

Sources of Geospatial Data	Benefits of Using Geospatial Data
<ul style="list-style-type: none">▪ Global Positioning System (GPS)▪ Remote Sensing or aerial photos▪ Geographic Information Systems (GIS)▪ Smartphones▪ Field observation▪ Higher education research projects▪ Media▪ Private companies▪ Government institution	<ul style="list-style-type: none">▪ Large quantities of information can now be rapidly gathered and stored.▪ These powerful tools used today allow viewers to see the world and data in new and interesting ways.▪ The data helps solve real world problems

Geographic Perspectives: The London Subway Map, p. 24

1. The map presents relative location clearly. The information presented is simple and easy to understand.
2. School map, road map, world map etc. A school map shows the location of classrooms but excludes where students gather to socialize. All maps have inaccuracies, but still provide useful information.

Think as a Geographer: Grouping Data, p. 25

1. The United States would have one large city, New York City. Even though Chicago and Philadelphia were twice the size of other major cities, they would all appear similar in size.
2. The United States would have three large cities. Even though New York was twice the size of Chicago or Philadelphia, all three would appear similar in size.

Chapter 1 Review Questions, pp. 26–29

Question Number	Answer	Skill	Learning Objective	Text Pages
Multiple Choice				
1	B	IMP-1.A	3.E	1–13
2	A	IMP-1.A	3.F	16–17
3	E	IMP-1.B	1.A	18–20
4	A	IMP-1.B	1.B	19
5	A	IMP-1.C	3.A	18–20
6	C	PSO-1.A	3.E	12–13
7	D	PSO-1.A	3.E	12–13

Chapter 1 Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Use the image of Earth at night above, your knowledge of Four-Level Analysis, and the course skills to answer the prompts. Also refer to the introduction discussion on verbs (page xxx) to assist you on how much to write for each part of the question.	
A. Identify the overall scale of the Earth at night image.	Global or world scale (either response is correct)
B. Describe TWO patterns on the map.	<p>Description must include a claim and specific details or examples that support the claim. Any two of the following are correct—must get both correct to receive the point.</p> <ul style="list-style-type: none"> ▪ The largest clusters of population are near the coasts—true of almost all continents and/or countries (China, U.S., etc.). ▪ The highly developed regions of the world are the brightest (Europe, U.S./Canada, Japan). ▪ The eastern side of the United States and/or China is brighter than the west. (for this early question we will accept the China and coastal patterns examples, but these patterns were identified in Part D and E. On the exam you may not get credit for citing examples already given. ▪ Linear (line) pattern of lights in any of the following: Egypt or Russia. ▪ There are very few lights in Africa and/or polar regions, eastern Russia, western China. ▪ The interior areas of continents have fewer lights. ▪ There are many more patterns that are acceptable.
C. Explain why the Earth at night image is considered a qualitative source and not quantitative.	<p>Must include a claim and specific details that explain the characteristics of a qualitative source and why it's not quantitative data by explaining quantitative data.</p> <ul style="list-style-type: none"> ▪ The "Earth at night" is an image taken from space from a satellite or the space station. It fits the definition of qualitative data source because it is a photo. Other qualitative sources include interviews, photographs, remote satellite images, descriptions, or cartoons. ▪ Quantitative data is any information that can be measured and recorded using numbers. The image shown does not include any numbers or quantitative data.

<p>D. Explain one reason why eastern China is brighter than western China.</p>	<p>Must include a claim and specific details that explain why this pattern exists. Any one the following is acceptable if explained.</p> <ul style="list-style-type: none"> ▪ Eastern China has better physical geographic characteristics to support population (fresh water, soil, and climate) ▪ Economic situational factors that improve prospects of jobs or economic activity on the coast (trade, ports, manufacturing, and jobs) Political and/or cultural power of China has resided in the eastern side of China. ▪ Western China has relatively more challenging physical geographic characteristics to overcome (deserts, mountains, and climate)
<p>E. Explain ONE economic impact of so many people living on the coasts of the world's continents.</p>	<p>Must include a claim and specific details that explain why this impact is occurring. Any one the following is acceptable if explained.</p> <ul style="list-style-type: none"> ▪ Higher population density results in higher rent or property costs ▪ More people on the coast can result in greater international trade ▪ Jobs can be relocated from the interior to the coast resulting in loss of jobs to interior provinces ▪ Coastal areas become wealthier than interior areas of a continent or country
<p>F. Explain ONE environmental impact of so many people living on the coasts.</p>	<p>Must include a claim and specific details that explain why this impact is occurring. Any one the following is acceptable if explained.</p> <ul style="list-style-type: none"> ▪ Increased air, water, noise, light or soil pollution on coastal areas because of greater population density ▪ Increased pressure on coastal ecosystems (plant, animal, or aquatic) from overuse or population pressure ▪ Habitat loss to either agricultural or urban land uses
<p>G. Describe a major limitation of using the Earth at night image to illustrate the location of the world's population.</p>	<p>Must include a claim and specific details that describe a limitation. Any one the following is acceptable if described and supported with details.</p> <ul style="list-style-type: none"> ▪ The image only shows places that have electricity or the wealth to turn lights on at night. ▪ The less developed regions of the world are often not represented with lights. Africa's population in particular is underrepresented. ▪ Rural and agricultural communities often do not show up on this scale of an image because population is less dense

CHAPTER 2 Spatial Concepts and Geographic Analysis

TOPIC 1.4 Spatial Concepts

Reflect on the Essential Question: What are the major geographic concepts that illustrate spatial relationships and patterns? p. 34

Geographic Spatial Concepts	Use of Concepts
Location	Where specific phenomena are located either on a grid system or relative to another location
Place	The specific human and physical characteristics of a location
Sense of place	Characteristics of places in different ways based on their personal beliefs
Toponyms	Place names that provide insights into the physical geography, the history, or the culture of the location
Time-space compression	The shrinking "time-distance," or relative distance, between locations because of improved methods of transportation and communication
Flow	The patterns and movement of ideas, people, products, and other phenomena
Patterns	The general arrangement of things being studied
Distribution	The way a phenomenon is spread out or arranged over an area to describe patterns

TOPIC 1.5 Human-Environment Interaction

Reflect on the Essential Question: How do human-environmental interaction and major geographic concepts explain spatial relationships and patterns? p. 37

Human-Environmental Interaction	Major Geographic Concepts
<ul style="list-style-type: none">▪ The study of how humans adapt to the environment is known as cultural ecology.▪ The belief that landforms and climate are the most powerful forces shaping human behavior and societal development while ignoring the influence of culture is called environmental determinism.▪ Possibilism is a view that acknowledges limits on the effects of the natural environment and focuses more on the role that human culture plays.	<ul style="list-style-type: none">▪ Natural resources are items that occur in the natural environment that people can use (renewable and nonrenewable resources).▪ Sustainability relates to trying to use resources now in ways that allow their use in the future while minimizing negative impacts on the environment.▪ The study of how land is utilized, modified, and organized by people is the essence of land use.

TOPIC 1.6 Scales of Analysis

Life Expectancy, 2019 World Map, p. 39

The map is global scale.

The data is at a country scale.

Answers will vary: Europe, Japan, Australia, and Canada have high life expectancies. Sub-Saharan Africa has shorter life expectancies.

Life Expectancy, North America, 2019 Map, p. 40

Using this scale of analysis allows for a more focused (zoomed in) view of a smaller area on a map. This allows for a better comparison of neighboring countries.

Life Expectancy Aggregated by State and County Map, p. 40

Regions that have above average life expectancy are in the west and northeastern United States.

Regions that have below average life expectancy are in the south.

A map aggregated by counties will have data that can be used to see patterns at the sub-state scale with more accuracy than state data.

Reflect on the Essential Question: What are scales of analysis and what do they reveal to geographers? p. 42

Different Scales of Analysis	Uses of Data From Each Scale
Global	Shows the entire world
World Regional	Shows multiple countries of the world
National/Country	Shows one country
National Regional	Shows a portion of a country or a region(s) within a country
Local	Shows a province, state, city, county, or neighborhood

TOPIC 1.7 Regional Analysis

See page 108 for a justice and race lesson plan related to Topic 1.7.

Reflect on the Essential Question: What are the ways geographers define regions? p. 46

Types of Regions	Characteristics of Each Region
Formal regions	Also called uniform regions, these share similar political, economic, cultural, and economic traits.
Functional regions	Also called nodal regions, these are united by networks of communication, transportation, and other interactions.
Perceptual regions	Also called vernacular regions, these are defined by the informal sense of place that people ascribe to them.

Geographic Perspectives: Thinking About Distance, p. 47

1. Transportation technology, culture, relative time, and scale (personal-global) can influence how people see/experience distance. People living in high-density cities view 1 mile differently than someone on a ranch.
2. The meaning of the word “close” changes based on the scale of analysis. Tampa and Orlando may be “close” on a state scale but are 85 miles apart. While “close” on a personal scale might be a few inches apart in an elevator.

Think as a Geographer: Grouping Data, p. 48

1. Answers will vary but should have the states classified based on a common characteristic that meets the definition of a formal region. One possibility of a formal region might be based on membership of the largest state university in the Southeastern Conference, a region that would include Arkansas and Louisiana.
2. Answers will vary but should recognize that a functional/nodal region is organized around a focal point. For example, Texas, Oklahoma, and Kansas are all part of the Big 12 athletic conference. The headquarters for the Big 12 Conference is in Irvine, Texas, so it could be the center of a functional/nodal region that includes these states.
3. Answers will vary but should have the states classified based on a common characteristic that meets the definition of a vernacular/perceptual region. One possibility might be a Baptist region consisting of Arkansas and Oklahoma, the two states where Baptists are the largest denomination. Another possibility could be a Mexican American region consisting of New Mexico and Texas, which have lower percentages of their population that speak primarily English.
4. One difficulty in defining regions is deciding where to establish boundaries, particularly for traits that change gradually over space, as language often does. A second is deciding what scale to use: state, county, city, neighborhood, etc. A third is that regions change over time: farmers in a place might plant corn one year and wheat or soybeans another year.

Chapter 2 Review Questions, pp. 49–51

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	D	PSO-1.B	1.B	36–37
2	E	PSO-1.A	1.B	32–33
3	B	PSO-1.A	2.A	15
4	D	PSO-1.B	4.A	35–36
5	B	PSO-1.B	1.A	37
6	D	PSO-1.D	3.E	38–41
7	B	PSO-1.D	5.A	38–40

Chapter 2: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Geographers use regions to make sense of the world in which we live and a variety of data sources to create regions.	
A. Explain the concept of region and how geographers use the term to make sense of locations.	A region is an area with one or more unifying characteristics. Geographers use the term to identify patterns, similarities, and differences they find in different spatial areas and may include physical or human characteristics.

B. Describe ONE major difference between formal and nodal regions.	Formal regions (uniform regions) are united by one or more traits (cultural, political, physical, or economic). Nodal regions (functional regions) are organized around a focal point and are defined by an activity that occurs across the region. These regions are often united by networks of communication and transportation that are centered on a node or central interaction point.
C. Explain how changing the scale of analysis can help geographers develop a deeper understanding of a region.	Changing the scale of analysis helps geographers develop a deeper understanding of a region by showing how one concept might apply in several contexts. For example, the density of the region a person lives in changes based on the scale of the region: it could be large, such as a neighborhood, or small, such as the entire world. This zooming in or zooming out helps geographers to see patterns that may not appear at other levels of analysis.
D. Identify TWO political regions shown on the map of Mexico on page 10.	Must identify any two of the following regions correctly to receive one point: Countries: Mexico, United States, Belize, Cuba, or Guatemala Cities: Juarez, Guadalajara, Ecatepec, Puebla, or Mexico City Border zone between the United States and Mexico
E. Identify TWO physical regions shown on the map of Mexico on page 10.	Must identify any two of the following regions correctly to receive one point: Bodies of water: Gulf of Mexico, Pacific Ocean. Mountain ranges or just mountains.
F. Describe how quantitative spatial data is used on the map of Mexico on page 10.	The scale on the map allows the reader to measure distance between locations on the map. For example, Mexico City is over 500 miles from Ciudad Juarez. (Note: the example of a specific distance is important to convince the reader that you understand quantitative data.)
G. Explain the type of qualitative data researchers use to develop a better understanding of migration from Mexico to the United States.	Qualitative data is information that is not placed into a number format but still explains why people may migrate from Mexico to the United States. Qualitative data can be obtained through interviews, pictures, or observations of migrants. A qualitative reason may be to escape poverty or crime in Mexico or migrate to the United States for political freedoms or a better life.

UNIT 1—Review Connecting Course Skills and Content

Applying Geographic Skills, p. 52

1A Answers will vary and might include:

- Sustainability relates to trying to use resources now in ways that allow their use in the future while minimizing negative impacts on the environment.
- The inverse relationship between distance and connection is a concept called distance decay.
- Defining and describing landscapes is called landscape analysis.

- 2E** The theory is largely discredited because of its reliance on the use of Europe as a case study and it does not account for the rise of non-European powers such as China today and in the past. Additionally, the theory is usually criticized for overstating the role of the environment in the development of and the success or failure of a country or society.
- 3A** Answers will vary and might include:
- Page 25, Population Change for the Largest Cities in 1900 is quantitative because it has population statistics for 10 cities at two different points in history.
 - Page 39, Life Expectancy, 2019 is quantitative because it shows the average life expectancy for all countries.
 - Page 41, Life Expectancy, 1770 to 2015 is quantitative because it is a line graph with four countries and the world showing changing life expectancy over 245 years.
- 4B** Answers will vary and might include:
- The North America at night image on page 5 shows the eastern part of the United States has more densely populated areas.
 - The image of Earth at night on page 29 shows more densely populated areas near coasts.
 - The image of polders and wind turbines on page 30 shows regular, rectangular plots of land near the interstate.
- 5A** Global: Earth at night, page 29
Regional: Life Expectancy, North America, page 40
National: Map of Mexico, page 10
Local: London Subway map, page 24

Write as a Geographer: Comprehend the Prompt, p. 52

1. The key content vocabulary is “urbanization, transportation system and region.” Task verb is “identify” and length of answer is 1–2 sentences.
2. The key content vocabulary is “distance-decay, customer base and retail store.” Task verb is “explain” and length of answer is 3–5 sentences.
3. The key content vocabulary is “absolute location, relative location and city.” Task verb is “explain” and length of answer is 3–5 sentences.
4. The key content vocabulary is “distribution patterns, highways, Florida.” Task verb is “describe” and length of answer is 3–5 sentences.
5. The key content vocabulary is “formal region and cultural.” Task verb is “define” and length of answer is 1–3 sentences. It should include a definition and an example.

UNIT 2:

Population and Migration Patterns and Processes

CHAPTER 3 Population Distribution and Composition

TOPIC 2.1 Population Distribution

Arithmetic and Physiological Population Densities Table, p. 59

Both Egypt and Japan lack arable land compared to the United States. In addition, the density is not as high in the United States, potentially decreasing the intensity in which the land must be used to provide food.

Japan's mountainous terrain, while difficult to farm, is generally abundant in water, which can feed the low-lying areas of the country. Egypt's water source (Nile River) is stable but political disputes with neighboring countries could threaten the reliable water source. Most importantly, Japan's wealth and high level of development allows Japan to access more advanced, higher yield agricultural techniques than the typical Egyptian farmer.

Reflect on the Essential Question: What are the factors that influence population distribution and what are the impacts of different methods used to calculate population density? p. 60

Factors Influencing Population Distribution	Methods Used to Calculate Population Density
Physical factors: <ul style="list-style-type: none"> Moderate climate (often found in midlatitudes) Low-lying areas Near water sources 	<ul style="list-style-type: none"> Arithmetic population density is calculated by dividing a region's population by its total area. Physiological population density is calculated by dividing population by the amount of arable land, or land suitable for growing crops. Agricultural population density compares the number of farmers to the amount of arable land.
Human factors: <ul style="list-style-type: none"> Near trade routes Near economic opportunities Political decisions 	

TOPIC 2.2 Consequences of Population Distribution

See page 109 for a justice and race lesson plan related to Topic 2.2.

Reflect on the Essential Question: How does population distribution and density affect society and the environment? p. 63

Population Density's Effects on Social, Political, and Economic Processes	Population Density's Effects on Environment and Natural Resources
Social effects: <ul style="list-style-type: none"> Facilities such as schools, police stations, fire stations, social assistance offices, and hospitals are usually positioned close to concentrations of population. 	<ul style="list-style-type: none"> The higher the population density, usually the greater the strain on the environment, such as air and water pollution or depletion of resources. The region's carrying capacity is the number of people a region can support without damaging the environment.
Political effects: <ul style="list-style-type: none"> Urban areas are continuing to increase in population and the population of rural areas is usually shrinking. This process of redrawing or adjusting boundaries is called redistricting. 	

(Continued)

Economic effects: <ul style="list-style-type: none">▪ Towns and cities have large concentrated populations that provide customers and workers for businesses, so that is where most businesses locate.	
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TOPIC 2.3 Population Composition

Reflect on the Essential Question: What are elements of population composition and how are those elements used by geographers to depict and analyze population composition? p. 69

Elements of Population Composition	Information Taken from Population Pyramids
<ul style="list-style-type: none">▪ Age▪ Gender▪ Birth rates▪ Death rates▪ Life expectancy	<ul style="list-style-type: none">▪ Population trends (population growth or decline)▪ Events that affect population (war)▪ Baby booms, baby busts, or echoes▪ Effects of migration▪ Size of potential labor force

Geographic Perspectives: Interpreting Dependency Numbers, p. 70

1. Answers may vary. Benefit: lower healthcare costs for a younger population. Problem: a shortage of working-age people for the country's labor force or high education costs.
2. Answers may vary. Benefit: the aging population shares skills and wealth. Increased jobs in healthcare for the aging. Problem: high cost of healthcare and social security for a population over age 65.
3. Answers will vary. 65 is common age for people to retire or work less.

Think as a Geographer: One Place, Many Densities, p. 70

1. Possible answers include that the United States has relatively few people for the size of the country, has more areas that are sparsely populated than do most countries, and has ample room for the population to grow in the future.
2. A resident of Salt Lake City might focus on living in a city that has a relatively high population density, or in a state with a relatively low population density.

Chapter 3 Review Questions, pp. 71–74

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	C	PSO-2.A	3.E	55–57
2	A	PSO-2.A	3.B	55–57
3	B	PSO-2.B	3.D	57–60
4	E	PSO-2.B	3.D	57–60
5	C	PSO-2.B	1.A	57–60
6	B	PSO-2.F	3.E	65–69
7	B	PSO-2.E	3.C	65–69

Chapter 3: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

The median age is the age at which half of all people are older and half of all people are younger. Changing scale is also an important tool for geographers to use to better understand patterns and processes. Use the map below to answer the questions that follow it.	
A. Describe the regional distribution of U.S. residents by median age.	<p>Either description is adequate for one point:</p> <ul style="list-style-type: none">▪ Most states with high median ages are in the east, from Maine to West Virginia to Florida. Montana also has a high median age. Listing just Florida is not acceptable because it is given as part of task B.▪ States in the west, particularly Idaho, Utah, and Texas, have younger median ages.
B. Explain why Florida has a relatively high median age compared to other states and its economic impact on the state of Florida.	<p>Answers should explain why. Stating that people retire to Florida is not enough for the point and they must describe the economic impact.</p> <p>Many people retire to Florida for one of the following reasons:</p> <ul style="list-style-type: none">▪ It has a warm climate but is still close to large cities on the east coast.▪ It has a low cost of living including low taxes.▪ It has access to water recreation.▪ The economic impact appears in many ways:<ul style="list-style-type: none">▪ Many jobs involve serving the elderly, such as working in retirement homes, health care facilities, transportation, or recreation.▪ The tax burden for providing health care is large.▪ Fewer public resources are directed toward schools and youth programs.▪ Income reliance on Social Security or other retirement payments is higher than in other states.
C. Explain ONE age- related issue that affects Texas more than Florida.	<p>Since Texas has a higher percentage of children than does Florida, several programs might be of greater concern to voters and elected officials:</p> <ul style="list-style-type: none">▪ funding schools▪ supporting daycare and other programs to help families raise children▪ providing public playgrounds or youth programs▪ supporting child health care and fighting childhood diseases, such as measles and mumps

D. Identify the scale in which the data on the map is aggregated.	The data on the map is aggregated at the state scale.
E. Using a specific location on the map, describe how changing the aggregated scale of the data could impact the patterns on the map.	<p>Many locations can be used, but the answer needs to include one of the following descriptions:</p> <ul style="list-style-type: none"> ▪ Zoom In: Using local, county ZIP code or other larger scaled data will result in more detail and show a different pattern of where people of different ages live. ▪ Zoom Out: Showing only the United States or other country data at a smaller country scale will show less specific information related to where people of different ages live.
F. Describe ONE additional specific quantitative data source, not shown on the map, which would help explain the patterns on it.	<p>Using any one of the following examples of quantitative (numerical) data, including a logical description, will result in one point:</p> <ul style="list-style-type: none"> ▪ Economic: tax rates, income, housing prices, cost of living, cost of health care, unemployment rate, number of available jobs ▪ Political: percentage of each political party ▪ Social/Cultural: test scores for schools, education rates, diversity rates, crime rates ▪ Demographic: Life expectancy, dependency rates (over 65 or under 15) ▪ Environmental: Average temperature, amount of snowfall or other weather, physical geography or climate related statistics
G. Describe ONE additional specific qualitative data source, not shown on the map, which would help explain the patterns on it.	<p>Using any one of the following qualitative data items, including a logical description, will result in one point:</p> <ul style="list-style-type: none"> ▪ photographs or satellite images of different areas ▪ interviews, newspaper, magazine, books, social media, or online articles related to communities or states ▪ visiting the locations and observing the cultural landscape

CHAPTER 4 Population Change

TOPIC 2.4 Population Dynamics

World Population Growth Since 1760, p. 76

Total population becomes a much steeper upward slope when growth rate spikes at the highest point. After 1970, as population growth starts to decline, total population still increases.

After 2020, the dotted lines show an inverse relationship or negative correlation. The growth rate continues to decrease, while the total population continues to rise (although at a slightly slower pace). This process is called *demographic momentum*. Even though growth rate is declining population continues to rise because life expectancy increases. Beginning in 2040 total population growth begins to slow down.

Life Expectancy by Country, 2015, p. 79

Highest: North America, Europe, highly developed or core regions have the highest life expectancies

Lowest: Africa, sub-Saharan Africa, less-developed or periphery regions have the lowest life expectancies.

The map is global scale with data aggregated at the country scale.

Reflect on the Essential Question: What are the factors that account for contemporary and historical trends in population growth and decline? p. 82

Current Trends in Population Growth and Decline	Historic Trends in Population Growth and Decline
<ul style="list-style-type: none">▪ The global population is increasing but at a decreasing natural increase rate.▪ Life expectancy is rising, because death rates are declining.▪ There is a drop in the infant mortality rate, the number of children who die before their first birthday.▪ The total fertility rate (TFR) is lower than in the past.	<ul style="list-style-type: none">▪ Population growth started a steep increase around 1920.▪ Average life expectancy worldwide has doubled in the last century.▪ Infant mortality rates were historically much higher than today.

TOPIC 2.5 The Demographic Transition Model

Reflect on the Essential Question: How does the Demographic Transition Model explain population growth and decline? p. 89

Demographic Transition Model's Explanation of Population Change	Epidemiological Transition Model's Explanation of Changing Death Rates
<ul style="list-style-type: none">▪ Stage 1 societies are typically subsistence farmers or hunters and gathers and have high birth rates and high fluctuating death rates▪ Stage 2 countries are usually less developed and have high birth rates (wide base) and low life expectancy (narrow top).▪ Stage 3 countries are often urbanizing with a declining birth rate and a more slowly declining death rate.	<ul style="list-style-type: none">▪ Stage 1 (disease and famine) has a high death rate and low life expectancy.▪ Stage 2 (receding pandemics) has a decreasing death rate and increasing life expectancy.▪ Stage 3 (degenerative and human-created diseases) has a death rate that stabilizes at a low level and life expectancy increases.

(Continued)

<ul style="list-style-type: none">▪ Stage 4 countries are usually more developed and have birth rates that are low but steady. The death rate is also low, indicating a high life expectancy and an increased percentage of older people.▪ Stage 5 countries often have a narrow base that reflects a very low birth rate and negative natural increase. The population is aging, and death rate may increase.	<ul style="list-style-type: none">▪ Stage 4 (delayed degenerative diseases) has a death rate that reaches its lowest level and life expectancy that reaches its peak.▪ Stage 5 (reemergence of infectious and parasitic diseases) potentially decreasing life expectancies.
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TOPIC 2.6 Malthusian Model

Malthusian Theory Graph, p. 90

Exceeding carrying capacity would likely result in widespread and massive starvation, which would limit population growth. Additionally, the likelihood of war, plagues, and economic struggles would increase.

Sahel Region with Natural Increase Rates Map, p. 92

Countries of the Sahel are in Stage 2 of the DTM because of very high natural increase rates.

These countries could avoid a crisis by implementing policies and practices that reduce birth rates. Also, these countries (possibly with economic assistance) could change farming methods that increase carrying capacity.

See page 110 for a justice and race lesson plan related to Topic 2.6.

Reflect on the Essential Question: How does Malthusian theory explain population growth and decline? p. 92

Malthus' Concerns About Population Growth	Checks or Impacts at the Point of Crisis
Malthus believed that food production would increase arithmetically—growing steadily by a similar amount each generation—while population would increase exponentially—growing steadily by a similar percentage each generation.	This imbalance would lead to overpopulation and increase the likelihood of starvation, food shortages, wars, plagues, and economic struggles.

TOPIC 2.7 Population Policies

China, 2016 Population Pyramid, p. 93

Most cohorts have fewer females than males. For example, the 0–4 cohort has approximately 44 million boys and 38 million girls. On average there are approximately 5 million more boys than girls per five-year cohort resulting in a difference of 25–30 million more males than females under the age of 24 in China.

China's Male and Female Populations Graph, p. 94

Cultural preference for the oldest child to be male is based on the belief that a male will be more easily able to provide economic support for aging parents and a desire to pass on the family name.

Reflect on the Essential Question: What are the intent and the effects of population and immigration policies on population size and composition? p. 95

Policies Encouraging Population Growth	Policies Discouraging Population Growth
<p>Pronatalist policies are designed to increase the fertility rate. For example, France, Sweden, and Japan provide paid time off from jobs held by mothers, free childcare, and family discounts on government services.</p> <p>Immigration Policies: Countries with policies that allow immigrants will often show increases of total population, working age (18–50), and males.</p>	<p>Antinatalist policies attempt to decrease the number of births in a country and are often used by developing countries. For example, the Chinese government introduced two different antinatalist policies in the 1970s.</p> <p>Immigration Policies: Policies that deny or limit immigration will often follow the population composition and growth of its native population.</p>

TOPIC 2.8 Women and Demographic Change

TFR and Schooling for Girls in Ghana Table, p. 97

TFR decreased for women in Ghana from 1990 to 2007 regardless of the years of schooling. Females with more years of education had lower TFRs. The group with the greatest decrease in TFR were females with 4 to 8 years of schooling. A girl who receives more education has a higher likelihood of delaying motherhood and greater income potential. With more education, infant mortality rates also decline. If women trust that their child will survive, they are more likely to have fewer children.

Reflect on the Essential Question: How has the changing role of females shown demographic consequences in different parts of the world? p. 98

Reasons for Reduced Fertility Rates	Effect of Social, Economic, and Political Roles for Women
<ul style="list-style-type: none"> Rural families often had more children to provide more labor on family farms. Rural-to-urban migration during and after the Industrial Revolution decreased the number of families in rural areas. When women moved to cities to work in factories, they often married and began families later in life. As educational opportunities for females have increased, fertility rates have dropped. 	<ul style="list-style-type: none"> Political changes have coincided with the expanded opportunities for women to gain education, access jobs and leadership roles, and make decisions about family size. In the United States, between 1950 and 2010, the median marriage age of women increased from just over 20 years of age to nearly 27. In the 20th and 21st centuries, many governments have increased educational opportunities for females which have expanded work options.

TOPIC 2.9 Aging Populations

Reflect on the Essential Question: What are the causes and consequences of an aging population? p. 101

Causes for Population Aging	Political, Economic, and Social Consequences of an Aging Population
<p>Longer life expectancy:</p> <ul style="list-style-type: none"> Improvements in healthcare and eldercare have allowed for life expectancies to increase in developed countries where people routinely live well into retirement. 	<p>Political consequences:</p> <ul style="list-style-type: none"> Potentially, political tensions can rise over differing political issues and age-specific viewpoints, such as increasing the retirement age or changing funding levels for education or Social Security.

<ul style="list-style-type: none"> ▪ In less-developed societies, life expectancies have also been increasing due to improved sanitation, healthcare, and food supply. 	<p>Economic consequences:</p> <ul style="list-style-type: none"> ▪ As people live longer, families face increasing social and economic challenges to care for elderly members. ▪ Positive impacts include retired grandparents assisting in raising grandchildren and maintaining a strong family unit for working parents.
<p>Lower crude birth rates and lower fertility rates. As the percentage of younger people in a population decreases and the number of people living into old age increases, the average age of a population increases. Fertility rates below 2.0 replacement can result in declining population.</p>	<p>Social consequences:</p> <ul style="list-style-type: none"> ▪ An aging country will often invest in additional services for the elderly, which might result in a reduction of spending in other areas or tax increases. ▪ Aging populations will often volunteer, continue working, and spend money in the economy, resulting in increased jobs and services for other workers. Additionally, many jobs are created in healthcare and eldercare.

Geographic Perspectives: Changing the Perception of Girls, p. 102

1. All posters show positive images, such as nice clothes and career opportunities. Girls can be successful in an increasing number of careers. Smaller families of one or two children often have more income to spend on homes, clothing, and education.
2. In some countries educational opportunities can be limited for girls. Showing two young girls reading validates the importance of girls and their need for education and other opportunities.
3. The poster shows that girls can grow up and contribute to society in many ways that have not been allowed historically. The professions shown have often been for men only.
4. Some cultures value girls less than boys. Sons are required economically to care for their elderly parents, while girls are viewed as a financial burden with less economic potential than boys.

Think as a Geographer: Predicting Population Change, p. 103

1. In many countries, population growth has slowed in recent years, particularly in countries that are relatively prosperous, and the education of females is increasing. This could be a pattern followed by the rest of the world. The DTM model shows a leveling out of population growth in stage 4.
2. The chart provides examples of how population growth can slow or be reversed by disease epidemics, political turmoil, and economic depression, as well as by globalization. Each of these factors could be more important in the future, which could lead to slower population growth.
3. The information in the chart shows that population growth from 1800 to 2000 was rapid which would support Malthus's theory. However, from 2000 to 2019 worldwide, and in each area listed, population or birthrates have decreased, which disproves Malthus's theory.

Chapter 4 Review Questions, pp. 104–106

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	E	IMP-2.B	3.B	83–86
2	A	IMP-2.B	3.D	83–87
3	D	IMP-2.B	3.E	67–68
4	B	SPS-2.B	1.B	96–97
5	B	SPS-2.C	1.C	100–101
6	A	IMP-2.A	3.B	83–85
7	C	IMP-2.A	3.D	83–85

Chapter 4: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Since 1950, population has grown fastest in less-developed countries and the total fertility rate is an important indicator of population growth. Use the graph above and the map about total fertility rates on page 78 to answer the following questions.	
A. Describe the population growth patterns of more-developed countries shown on the graph.	<p>Either of the following answers is acceptable:</p> <ul style="list-style-type: none"> Population increased slightly from under 1 billion people to just over 1 billion people in the past 60 years. Overall growth was slow, low, or just above replacement (0%–1% annual growth).
B. Explain one reason why the pattern in A is occurring.	<p>Must include a claim and specific details that answers why the pattern is occurring.</p> <ul style="list-style-type: none"> More-developed countries are in stage 4 or 5 of the Demographic Transition model. This means that birth rates (BR) and death rates (DR) are both low, resulting in a low or negative natural increase (NI). More-developed countries' population has increased slightly because of migration from less-developed to more-developed countries. High development results in longer life expectancy and lower child mortality rates, which eventually leads to low birth or fertility rates.
C. Using both sources, explain ONE reason why population is growing faster in less-developed countries than in more developed countries.	<p>Must include a claim and specific details as to why the pattern is occurring. Claim: Higher fertility rates in less-developed countries than in more-developed countries.</p> <p>Explanation: Any one of the following is acceptable as long as the response includes information from graph and map:</p> <ul style="list-style-type: none"> High fertility rates in less-developed countries result in a BR higher than DR, which results in rapid population growth. Conversely, low fertility rates in more-developed countries result in BR and DR being relatively equal and near zero population growth. Less-developed countries have more young people than do more-developed countries, which creates demographic momentum. It takes more time for population growth to slow because young people are more likely to have children than are older people. Gender inequality tends to be higher in less-developed countries, which often results in higher fertility rates. When women have fewer rights, it often inhibits their access to jobs, education, and family planning.

	<ul style="list-style-type: none"> Higher fertility rates in less-developed countries are often the result of agricultural or secondary economies that are more labor intensive as compared to more-developed countries, which results in an economic incentive for larger families in less-developed countries. 								
D. Explain ONE social consequence of uneven population growth between less-and more-developed countries.	<p>Must include a claim and specific details that explain the consequence.</p> <table> <tr> <th>Claim</th><th>Explanation</th></tr> <tr> <td>Need to continue to improve health care, housing and education in less-developed countries</td><td>Less-developed countries will be under pressure to provide resources for a rapidly increasing population.</td></tr> <tr> <td>Migration from less-developed countries to more-developed countries</td><td> <p>Migration can result in brain drain from less-developed countries or brain gain in more-developed countries.</p> <p>Cultural tension can result as migrants move into more-developed countries</p> </td></tr> <tr> <td>Increased need for international aid</td><td> <p>As the less-developed countries' share of world population increases, so will aid. Most aid flows from more-developed countries to less-developed countries.</p> <p>As the percentage of population decreases in more-developed countries the pressure will increase to find new sources of aid.</p> </td></tr> </table>	Claim	Explanation	Need to continue to improve health care, housing and education in less-developed countries	Less-developed countries will be under pressure to provide resources for a rapidly increasing population.	Migration from less-developed countries to more-developed countries	<p>Migration can result in brain drain from less-developed countries or brain gain in more-developed countries.</p> <p>Cultural tension can result as migrants move into more-developed countries</p>	Increased need for international aid	<p>As the less-developed countries' share of world population increases, so will aid. Most aid flows from more-developed countries to less-developed countries.</p> <p>As the percentage of population decreases in more-developed countries the pressure will increase to find new sources of aid.</p>
Claim	Explanation								
Need to continue to improve health care, housing and education in less-developed countries	Less-developed countries will be under pressure to provide resources for a rapidly increasing population.								
Migration from less-developed countries to more-developed countries	<p>Migration can result in brain drain from less-developed countries or brain gain in more-developed countries.</p> <p>Cultural tension can result as migrants move into more-developed countries</p>								
Increased need for international aid	<p>As the less-developed countries' share of world population increases, so will aid. Most aid flows from more-developed countries to less-developed countries.</p> <p>As the percentage of population decreases in more-developed countries the pressure will increase to find new sources of aid.</p>								
E. Explain ONE economic consequence of uneven population growth between less- and more-developed countries.	<p>Must include a claim and specific details that explain the consequence.</p> <table> <tr> <th>Claim</th><th>Explanation</th></tr> <tr> <td>Increased need for international aid money</td><td>As the less-developed countries share of world population increases, so will aid. Most aid flows from more-developed countries to less-developed countries. As the percentage of population decreases in more-developed countries the pressure will increase to find new sources of aid.</td></tr> <tr> <td>More-developed countries need workers</td><td>As population growth slows in more-developed countries a shortage of workers may result, which will likely increase the number of migrants from less-developed countries.</td></tr> <tr> <td>Increased pressure on economy and government funding in less-developed countries</td><td>Less-developed countries could struggle to provide jobs and funding for services, such as education and medical care.</td></tr> </table>	Claim	Explanation	Increased need for international aid money	As the less-developed countries share of world population increases, so will aid. Most aid flows from more-developed countries to less-developed countries. As the percentage of population decreases in more-developed countries the pressure will increase to find new sources of aid.	More-developed countries need workers	As population growth slows in more-developed countries a shortage of workers may result, which will likely increase the number of migrants from less-developed countries.	Increased pressure on economy and government funding in less-developed countries	Less-developed countries could struggle to provide jobs and funding for services, such as education and medical care.
Claim	Explanation								
Increased need for international aid money	As the less-developed countries share of world population increases, so will aid. Most aid flows from more-developed countries to less-developed countries. As the percentage of population decreases in more-developed countries the pressure will increase to find new sources of aid.								
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Increased pressure on economy and government funding in less-developed countries	Less-developed countries could struggle to provide jobs and funding for services, such as education and medical care.								

F. Explain ONE political way that countries have attempted to lower their total fertility rate.	<p>Must include a claim and specific details that explain the consequence.</p> <p>Claim: Population Policies</p> <p>Explanation/Details/Examples:</p> <ul style="list-style-type: none"> • antinatalistic policies that impose penalties and/or incentives to limit children • increased government funding and access for family planning • improved gender equity laws (education, jobs, health care, income, political power)
G. Describe ONE unintended consequence of the political policy in F.	<p>Any one of the following will result in one point:</p> <ul style="list-style-type: none"> • unbalanced gender ratio: male preference often results in more boys than girls in a society • cultural or social tension: rapid changes in culture and family structures can result in challenges within a society • slow growth: population can grow too slowly resulting in economic and social problems in the future

CHAPTER 5 Migration

TOPIC 2.10 Causes of Migration

Age-Sex Pyramid of International Migrants, 2019 Northern Africa and Western Asia,
p. 113

Males outnumber females in most age cohorts, especially among those of working age. This is because males are more likely to migrate to the region to work in oil and construction jobs. Some sending countries have laws that block women from migrating internationally.

Reflect on the Essential Question: How have different causal factors encouraged migration? p. 114

Push and Pull Factors	Explanation of Push and Pull Factors as Cultural, Demographic, Economic, Environmental, or Political
Push: Escape religious persecution (Mormons migrating from Eastern United States to Utah)	A cultural push factor since peoples' safety and lives are threatened. The religious freedom of their destination is a pull factor.
Push: Rapid population growth results in lack of jobs or dangerous communities in home country	A demographic and economic push factor because of overpopulation (demographic) and the lack of jobs is economic.
Pull: Available jobs (factory workers moving to southern U.S. states for factory work, for example)	An economic pull factor would be job opportunities in another location. The push factor would be a lack of jobs.
Push: Environmental crises (people in and near Fukushima after the nuclear power plant disaster, for example)	Environmental push factors that threaten lives and safety force people to leave the area. Safety of other locations are pull factors.
Push: Corrupt political leader Pull: Stable and safe government	Political push factor as people who opposed the new government might be arrested or killed. The political freedom of other locations are pull factors.

TOPIC 2.11 Forced and Voluntary Migration

Syrian Refugees Image, p. 116

Refugees safety and lives are often in danger. The Syrian refugees were fleeing a civil war that resulted in the deaths of hundreds of thousands of people. The hope of migrating to the safety and opportunities of Europe was worth the risk to many people.

Refugees, 2016 Map, p. 116

The highest number of refugees are located in the Middle East and central Africa. There are also high numbers of refugees in central Europe. Most refugees locate in counties near to the country they fled. For example, Turkey is the neighboring country of Syria, the source of most of Turkey's refugees.

Patterns of Human Migration, p. 118

Largest source of migrants: Asia, Latin America, or periphery countries

Most common destination of migrants: North America, Europe, or core countries.

Push: political instability/war, population growth, lack of economic opportunities/jobs.

Pull: political stability/freedom, declining population and the need for workers, and hope of economic opportunity.

See page 110 for a justice and race lesson plan related to Topic 2.11.

Reflect on the Essential Question: What are the types of forced and voluntary migration? p. 119

Examples of Forced Migrations	Examples of Voluntary Migrations
<ul style="list-style-type: none">From the 15th through the 19th centuries, about 12.5 million Africans were captured, enslaved, and forcibly moved from their homes in Africa to North America, the Caribbean, South America, and the Middle East.The Syrian Civil War resulted in more than 6 million internally displaced persons and more than 4 million refugees.Thousands of Haitians relocated to neighboring countries after earthquakes in 2010.	<ul style="list-style-type: none">Rural-to-urban migration, where people leave villages and small towns for opportunities in cities and more densely settled areas is common in Kenya and India.Transnational migration and chain migration happen often with migrants from Mexico to the United StatesCountries in the Persian Gulf are notable for having large percentages of the total populations made up of foreign migrants as guest workers in the petroleum industry.

TOPIC 2.12 Effects of Migration

Reflect on the Essential Question: What are historical and contemporary geographic effects of migration? p. 122

Policies Influencing Migration	Effects of Migration
Guest worker policies	Policies that regulate the number of workers who can temporarily enter each country to work in specific industries for a defined amount of time. Remittances are often sent back to family in source country.
Family reunification policies	Policies that allow migrants to sponsor family members who migrate to the country. Remittances are often sent back to family in source country.
Policies that reflect xenophobia	These restrictions reflect cultural dislike of others or economic concern that immigrants will take away jobs from citizens. Attempts are made to maintain culture.

Geographic Perspectives: American Immigration and Migration pp. 123–124

1. 1970–2010
2. 1820–1869: Europe
1870–1919: Europe
1920–1969: Europe
1970–2010: North and South America
3. Crises, such as world wars, have increased the numbers of internal migrants within the United States.
4. All three categories have been pull factors at different times. People migrated for jobs (economic) to different regions, racial persecution (culture) caused many to move out of the South, and many people have moved to warmer regions or states (environmental).

Think as a Geographer: Influences on Migration, p. 124

1. One event that increased the push for Mexicans to migrate was in 1982: “An economic crisis hits Mexico.” Three events reduced the push:
 - 1970 to 2010: “The TFR for women in Mexico falls from 7 to 2.”
 - 1979 to 1982: “Worldwide oil demand creates a boom in Mexico.”
 - 2000: “Election of a new leader in Mexico creates hope.”
2. One event that increased the pull of the United States for Mexican immigrants was from 2000 to 2010: “The United States increases the number of agricultural work visas from 29,000 to 52,000.”
3. The event for 1979 to 1982: “Worldwide oil demand creates a boom in Mexico” shows how Mexico is important in the global oil economy.

Chapter 5 Review Questions, pp. 125–127

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	E	IMP-2.C	4.E	110–112
2	B	IMP-2.C	1.C	83–87, 109–111
3	B	IMP-2.C	2.C	111
4	D	IMP-2.E	1.B	115–119
5	B	IMP-2.D	4.E	112
6	C	IMP-2.D	1.B	112–113
7	C	IMP-2.D	1.A	115–117

Chapter 5: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

The graph depicts the distance-decay model of migration and the map shows numerous global migration flows.	
A. Define the concept of distance-decay shown in the graph.	Most migrants move short distances. However, as the distance a migrant travels increases, the number of migrants decreases.
B. Using both visuals, explain how a specific migration trend from the map illustrates the concept of distance-decay.	<p>The following trends best illustrate distance-decay because the distance between the locations is short, but the number of migrants is relatively large. Students must correctly identify one flow with countries or regions mentioned, not just the letter of the flow:</p> <ul style="list-style-type: none"> ▪ Flow B: Central America/Mexico to the United States ▪ Flow C: Middle East/Syria to Europe or any central or western European country ▪ Flow D: South Asia/India to Middle East/Saudi Arabia/ Dubai/UAE or other Southwest Asian countries <p>Flow A does not work because the distance is too far.</p>
C. Explain the difference between push and pull factors.	<p>Push factors are the reasons that a person moves from a specific area or region and are usually negative. Pull factors are the reasons they choose to move to a specific destination and are usually positive.</p> <p>Students should support their answers with specific examples that demonstrate their understanding. For example, many people leave the Midwestern United States because of extremely cold weather (push). They often choose to migrate to Florida because of its warm winters (pull).</p>
D. Using a migration stream from the map, identify ONE economic pull factor.	<p>Must identify stream country/region and the reason:</p> <ul style="list-style-type: none"> ▪ Potential jobs or higher income opportunities ▪ Flow A or B in the United States, Flow C in Europe, Flow D in the Middle East
E. Using a migration stream from the map, identify ONE political push factor.	<p>Must identify stream country/region and the reason:</p> <ul style="list-style-type: none"> ▪ Political persecution, corruption, instability, war, or anti-government viewpoints ▪ Discriminatory laws (religion, culture, ethnicity, gender) ▪ Health concerns due to lax environmental laws ▪ Any of the streams are correct but must mention a specific country or region, such as Central America, the Middle East, India, or China
F. Describe ONE positive result for countries receiving migrants.	<p>A description of any of the following:</p> <ul style="list-style-type: none"> ▪ Economic benefits: cheap labor, skilled labor (brain gain), increased labor force, and entrepreneurs ▪ Increased diversity: culture, beliefs, ideas, and food
G. Describe ONE positive result for countries sending migrants.	<p>A description of any of the following:</p> <ul style="list-style-type: none"> ▪ Remittances (money) sent back to family or friends in sending country ▪ Decreased social, demographic, or economic problems because people leave the country

Unit 2—Review

Applying Geographic Skills, p. 128

- 1B** The demographic transition model (DTM) explains population growth or decline through stages that countries experience as they modernize. Population typically grows as a country progresses through the first four stages of the model. Population growth levels off near the end of Stage 4 and begins to decline in Stage 5.
- 2B** An aging population in a developed country with no population growth will likely result in a lack of employees for that country. The less-developed country will provide laborers since it is close proximity and likely has a population that desires higher paying jobs or even lacks jobs.
- 3F** The map is aggregated to the country scale so differentiations within a country are not visible.
- 4D** Each image shows girls in a positive manner. Some cultures value boys more than girls and these posters show that countries have made an effort to illustrate the positive contributions that females can make to society if given equal opportunities.
- 5D** Malthusian theory outcomes have not occurred on a global scale. It can be argued that on the local or regional scale that the outcomes predicated by Malthus are evident in the Sahel region and some local areas in Africa and south Asia. Large scale international aid has averted disasters in some regions.

Write as a Geographer: Plan the Answer, p. 129

1. Part A

The answer should include a plan for two sections or two paragraphs, each of which should state and identify the main features of a pull factor that might cause someone to migrate to the United States. For example, some pull factors include political or religious freedom, economic opportunity, the chance to get an education, family unity, safety, and stability. The response should be 4–8 sentences in length.

Part B

The answer should include a plan for two sections or two paragraphs, each of which should state and identify the main features of a push factor that might cause someone to migrate away from the United States. For example, some push factors include unemployment, crime, political persecution, family unity, high cost of living, or a sense of adventure. The response should be 4–8 sentences in length.

Part C

The answer should include a plan for three sections or paragraphs, each of which should focus on explaining a consequence of migration to or from the United States. Each should include specific details to support the main focus. For example, increased migration into the United States might increase the size of the work force, the market for products, the number of children to educate, the diversity of the population, and the ideas for innovation. Increased migration out of the United States might increase connections between U.S. residents and people in other countries, and remittances flowing into the United States. Other effects could be on cultural diversity and schools. The response should be 3–5 sentences for each consequence with a total length of 9–15 sentences.

UNIT 3:

Cultural Patterns and Processes

CHAPTER 6 Cultural Landscapes, Patterns, and Diffusion

TOPIC 3.1 Introduction to Culture

Reflect on the Essential Question: What characteristics, attitudes, and traits influence geographers when they study culture? p. 137

Influences on Geographers	Explanation of Influences on Geographers
Cultural traits	The visible and invisible elements of a group of people
Cultural complex	A series of interrelated cultural traits
Diffusion	The spread of culture to other places
Taboos	Behaviors discouraged by a culture
Traditional cultures	The values, practices, and beliefs of a group that generally resistant to rapid change and are passed down to following generations
Folk cultures	The beliefs and practices of small, homogenous groups of people, often living in rural areas that are relatively isolated and slow to change
Indigenous cultures	Those in which members of an ethnic group reside in their ancestral lands, and typically possess unique cultural traits
Popular culture	When cultural traits spread quickly over a large area and are adopted by various groups
Global culture	Popular culture traits that are adopted worldwide

TOPIC 3.2 Cultural Landscapes

Cultural Changes Along Interstate 25 Map and Image, p. 139

Native American and Spanish culture influenced the built landscape in Santa Fe and along I-25. Spanish toponyms (Las Vegas, Santa Fe) Native American toponyms (Cheyenne) exist along the interstate. Other toponyms are U.S. English (Denver, Fort Collins) and represent the conquering of the region by the United States.

The Ten Major Culture Realms, p. 142

Answers may vary depending on the realm but could include language, ethnicity, religion, and traditions. For example, Anglo America includes both Canada and the United States, which both have large populations of English speakers and history of English colonization. However, both countries have large immigrant populations, creating ethnic, religious, and linguistic diversity.

African American Population, United States and Chicago, p. 146

At the national scale, African Americans often reside in the Southeast and East. At the local level, Blacks are often concentrated in urban neighborhoods. The Illinois map shows an African American population of 10–20 percent for the state, but the map of Chicago shows neighborhoods of more than 49.1 percent African Americans.

See page 111 for a justice and race lesson plan related to Topic 3.2.

Reflect on the Essential Question: What are the characteristics of cultural landscapes and how do those characteristics, land use, and resource use reflect cultural beliefs and identities? p. 147

Characteristics of Cultural Landscapes	Reflection of Cultural Identities in Land and Resource Use
Built environment	The physical artifacts humans have created and that form part of the landscape
Traditional architecture	Style that reflects a local culture's history, beliefs, values, and community adaptations to the environment, and typically utilizes locally available materials
Postmodern architecture	Movement after 1960 toward high rise structures made from large amounts of steel and glass siding
Ethnic enclaves	Clusters of people of the same culture
Sacred places	Specific places and natural features have religious significance
Ethnic island	Concentration of an ethnic group in a rural area

TOPIC 3.3 Cultural Patterns

Reflect on the Essential Question: What are the patterns and landscapes of language, religion, ethnicity, and gender? p. 153

Religious Patterns That Shape the Global Landscape	Factors That Create Centripetal and Centrifugal Forces
<ul style="list-style-type: none"> A culture hearth is where a religion or ethnicity began. The spread of religious settlements, both locally and globally, contributes to the sense of place and of belonging for each religious group and greatly shapes the cultural landscape. Maps, charts, and other data help geographers understand the growth, decline, and movement of the world's religions and their effects on cultural landscapes. 	<ul style="list-style-type: none"> Centripetal forces may include a common language and religion, a shared heritage and history, ethnic unity and tolerance, a just and fair legal system, a charismatic leader, or any other unifying aspect of culture. Centrifugal forces include different languages and religions, a separate past, ethnic conflict, racism, unequal application of laws, or dictatorial leadership. These are just a few of the many cultural attributes that can sow division within a society.

TOPIC 3.4 Types of Diffusion

Reflect on the Essential Question: What are the types of diffusion and when does each occur? p. 157

Types of Diffusion	Examples of Types of Diffusion
Relocation diffusion	An example is the spread of European culture around the world via colonialism starting in the 1500s.
Contagious diffusion	An example is the spread of blues music which diffused northward and reached cities such as St. Louis, Chicago, and New York as musicians heard and began to play in that style.

(Continued)

Hierarchical diffusion	Cell phones are an example. Initially owned by wealthy people in urban areas within developed countries, cell phones eventually leapfrogged to other cities and to people with a wider range of incomes. After multiple steps of diffusion, cell phones eventually spread to a worldwide market.
Reverse hierarchical diffusion	Walmart stores diffused from rural Arkansas to small cities and now nearly every city in the United States.
Stimulus diffusion	Hindus in India adopted the practice of eating fast food, but they adapted the custom by making vegetarian and other non-beef types of burgers available because eating beef violates their religious beliefs.

Geographic Perspectives: Muslims of the United States, pp. 157–158

1. Forced migration
2. To be near others that share similar customs, traits, beliefs, and traditions.

Think as a Geographer: Religious Spaces at Different Scales, p. 158

1. The concept of scale is very local, in the case of a family's home. This is because congregational worship is not part of Hinduism. Most important religious ceremonies take place in the home, and shrines are usually built to a particular god that is important to that family or individual.
2. Vatican City represents the global scale as the hearth of the Catholic Church. It is home to the Pope (head of the Catholic religion) and houses the global administrative structures of Catholicism.
3. Pagodas represent a more regional scale of Buddhism. They were built to house relics from the Buddha or his more prominent followers (usually monks). Pagodas attract believers from a local region who make a pilgrimage to see the relic. Additionally, the architectural style of pagodas varies from region to region where Buddhism is found.

Chapter 6 Review Questions, pp. 159–162

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	A	PSO-3.A	4.E	132–133
2	C	PSO-3.A	1.A	133–134
3	D	PSO-3.B	4.A	135–137
4	C	PSO-3.C	1.D	140–141
5	D	PSO-3.B	1.A	136
6	A	PSO-3.A	1.D	133–134
7	D	PSO-3.A	2.A	133–134

Chapter 6: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Cultural values and traditions help people develop a sense of place where they live. As globalization increases, various cultures come in contact with each other, resulting in a variety of processes and impacts.	
A. Define the concept of cultural landscape.	Cultural landscape is the modification of the environment by a group and is a visible reflection of that group's cultural beliefs and values. For example, signs reflect language, and places of worship reflect religious traditions. Cultural landscape is sometimes referred to as the built environment.
B. Define the concept of globalization.	Either definition is correct: <ul style="list-style-type: none">▪ The process of intensified interaction among peoples, governments, and companies of different countries around the globe.▪ The increased integration or connectivity of the world economy.
C. Using the image of Tokyo, Japan, describe an element of the photo that illustrates globalization.	Any one of the following is correct: <ul style="list-style-type: none">▪ multiple transnational company signs, including Forever 21, Visa, MasterCard, and Starbucks▪ both Japanese and English are used▪ clothing includes Western-style suits and hats▪ signs that show musicians, models, and international personalities▪ image looks similar to Time Square or large cities in other countries
D. Explain the diffusion of popular culture using the concept of hierarchical diffusion.	Must include a claim and specific details related to hierarchical diffusion. They must answer why a pattern is occurring. <ul style="list-style-type: none">▪ Hierarchical diffusion occurs when traits spread or leapfrog from one important person, influencer, city or powerful class to another important person, influencer, city, or powerful class.▪ Popular culture often spreads from one big city to another. This can be sped up using social media or the Internet.▪ An example will strengthen the answer: For example, Starbucks is an American company, but it has spread to other countries and cities in the world that have the wealth to afford the coffee or food.▪ Other examples are acceptable as long as they illustrate the concept of hierarchical diffusion.
E. Explain how traditional cultures most commonly diffuse.	Must include a claim and specific details related to how traditional cultures diffuse: <ul style="list-style-type: none">▪ Relocation diffusion occurs when people move from one place to another and take their culture with them.▪ Contagious diffusion occurs when oral traditions are passed down through stories or music.▪ An example to illustrate will strengthen the response. Stating that culture spreads slowly helps the response but is not enough by itself for full credit.

F. Describe how global culture is threatening to traditional folk cultures.	<p>Any one of the following will be awarded credit, as long as it accurately describes the threat. Better answers will include an example but are not required.</p> <ul style="list-style-type: none"> ▪ Popular culture emphasizes trying what is new rather than preserving what is traditional. ▪ Young people often adopt global popular culture and do not adopt traditional culture which can result in the extinction of the traditional culture. ▪ Traditional culture is usually found in rural areas, but people often move to urban areas that usually emphasize popular global culture. ▪ Increased use of the Internet (global culture) often challenges the beliefs of traditional oral traditions.
G. Identify the scale of analysis of the image and describe a limitation of the image relate to the scale.	<p>Answers must accurately identify the scale <u>and</u> describe a limitation of the image.</p> <p>Any one of the following is the correct scale: Local, city, neighborhood</p> <p>Any one of the following limitations of the image related to scale is correct:</p> <ul style="list-style-type: none"> ▪ Image only shows one neighborhood and not a wider area such as the city or country. ▪ The time of day, month, or year the image was taken may influence who appears in the image. This can misrepresent the overall city, neighborhood, or country.

CHAPTER 7 Historical and Contemporary Processes of Diffusion

TOPIC 3.5 Historical Causes of Diffusion

Most Spoken Languages in the World Table, p. 165

Mandarin and Hindi

The cultures that speak these languages didn't establish colonies around the world which would have resulted in diffusion of the languages. Neither language has been adopted as a global lingua franca similar to English.

See page 112 for a justice and race lesson plan related to Topic 3.5.

Reflect on the Essential Question: How do historical processes impact current cultural patterns? p. 167

Historical Processes That Have Shaped Culture	Resulting Cultural Patterns
Imperialism	Ways of influencing another country or group of people by direct conquest, economic control, or cultural dominance
Colonialism	Particular type of imperialism in which people settle on the land of another country and their culture diffuses to the indigenous people
Lingua francas	Common language used by people who do not share the same native language
Pidgin languages	Simplified mixture of two languages
Creole languages	Two or more separate languages can mix and develop a more formal structure and vocabulary so that they are no longer a pidgin language

TOPIC 3.6 Contemporary Causes of Diffusion

Hierarchical Diffusion Via Social Media Influences, p. 169

Answers will vary. Possible answers could include more influencers, specific social media platforms, or each follower on the graphic usually has additional followers or friends. Cross connections back or between influencers and followers.

Reflect on the Essential Question: How do contemporary processes impact cultural patterns? p. 170

Methods of Contemporary Diffusion	How Methods Diffuse Culture
Communication technologies	This has allowed for the globalization of popular culture through multiple methods of spatial diffusion. Music, video games, TV shows, cars, and clothing are heavily influenced by mass media, the Internet, and traditional and online publishing.
Time-space convergence	Time-space convergence provides another way of thinking about geography as not just physical space but also of relative distance. While transportation and communication changes do not actually "shrink" the earth, the time and cost of movement between places have greatly decreased, making the earth feel smaller.
Cultural convergences	As the relative distance between places shrinks, the interactions among cultures increase. Therefore, cultures are becoming similar to each other and sharing more cultural traits, ideas, and beliefs.

TOPIC 3.7 Diffusion of Religion and Language

Latin Words Related to Words in Other Languages Table, p. 173

Many of the words start with the same first or first two letters. Even if the words are spelled differently, they have a similar sound. These words developed from the same language or are in a language family.

Words can change over time when used in different locations or influenced by other cultural or political factors.

Examples of Official Languages in Africa Map, p. 175

Arabic is a common language in northern Africa. English is common in southern and eastern Africa. French is a common language in central and western Africa.

Ethiopia was not colonized as other African countries were and therefore was not forced to accept the language of a colonizing country.

Reflect on the Essential Question: What factors led to the diffusion of universalizing and ethnic religions? p. 181

Universalizing and Ethnic Religions	Types of Diffusion
Hinduism	<ul style="list-style-type: none"> Expansion diffusion across Indian subcontinent Relocation diffusion in recent decades to Europe and the United States
Buddhism	<ul style="list-style-type: none"> Contagious diffusion as teachings spread throughout East and Southeast Asia along land and water trading routes Relocation diffusion throughout the world
Judaism	<ul style="list-style-type: none"> Relocation diffusion throughout North Africa and Europe forced by the Romans beginning around 70 C.E. Relocation diffusion to the United States and other countries including return migration to Israel post-1948
Christianity	<ul style="list-style-type: none"> Contagious diffusion via conversion and missionaries through the Middle East, Europe, and Central Asia Hierarchical diffusion through conversion of rulers, who then forced their followers to adopt the faith Expansion and relocation diffusion throughout the world via imperialism and colonialism
Islam	<ul style="list-style-type: none"> Contagious diffusion by trade and conquest to Spain, Africa, and much of Asia Relocation diffusion throughout the world

TOPIC 3.8 Effects of Diffusion

Reflect on the Essential Question: How does the process of diffusion change the cultural landscape? p. 184

List of the Effects of Diffusion of Culture	Explanation of the Effects of Diffusion of Culture
Acculturation	When an ethnic or immigrant group moves to a new area adopts the values and practices of the larger group that has received them, while still maintaining valuable elements of their own culture
Assimilation	When an ethnic group adopts the values and practices of another group and can no longer be distinguished from the receiving group
Syncretism	The fusion or blending of two distinctive cultural traits into a unique new hybrid trait
Multiculturalism	The coexistence of several cultures in one society with the ideal of all cultures being valued
Nativism	Anti-immigrant attitudes that form among the cultural majority, sometimes bringing violence and government actions against the immigrant or minority group

Geographic Perspectives: Spanish at Various Scales, pp. 185–186

1. At the national scale, English is the most commonly spoken language. Yet, many places at smaller scales have a higher number of people who speak Spanish.
2. More Hispanics in the United States speak English since 2000. That trend exists for both age groups but is more common for those ages 5–17.

Think as a Geographer: Language Connections in New York, p. 186

1. The largest number of New Yorkers speak English, which is the main language of the United State. It would also have strong connections with other countries where English dominates, such as Great Britain, India, and Australia. In addition, because New York has so many Spanish speakers, it would have strong connections to Latin America. Chinese is also spoken by over 400,000 people leading to connections with China.
2. New York City is very diverse based on the number of languages spoken, but native speakers of all languages who learn English can use it to communicate with others, which broadens the connections between cultures and businesses.
3. The cultural landscape would provide evidence through store signs, types of food, the names of streets, parks, and religious structures.

Chapter 7 Review Questions, pp. 187–189

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	E	IMP-3.B	1.B	175
2	A	IMP-3.B	1.B	174–175
3	D	SPS-3.A	1.D	164–165
4	C	IMP-3.B	3.E	176–177
5	A	SPS-3.B	2.B	164
6	B	IMP-3.B	2.B	182–184
7	B	SPS-3.A	1.B	182–183

Chapter 7: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Two major religion hearths in the world are Southwest Asia and South Asia. Religions diffused from these regions to many others.	
A. Identify ONE religion that originated in Southwest Asia and a country today where the majority of people follow the religion.	<p>Any of the following responses will earn credit:</p> <ul style="list-style-type: none"> ▪ Judaism is dominant in Israel today. ▪ Christianity is dominant in Europe, North America, South America, Australia, and New Zealand. ▪ Islam is dominant in North Africa, the Middle East, Bangladesh, and Indonesia.

B. Identify ONE religion that originated in South Asia and a country in the world today where the majority of people follow the religion.	Any of the following responses will earn credit: <ul style="list-style-type: none"> ▪ Hinduism is dominant in India. ▪ Buddhism is dominant in Mongolia, Myanmar (Burma), Thailand, Laos, Cambodia, and Vietnam.
C. Describe the differences between universalizing and ethnic religions.	Any of the following comparisons can be used to earn credit: <ul style="list-style-type: none"> ▪ Recruitment: Ethnic religions rarely recruit members because they are typically born into an ethnic religion while universalizing religions generally actively seek converts. ▪ Diffusion: Ethnic religions generally spread via relocation diffusion while universalizing religions can spread via relocation or expansion diffusion.
D. Explain how hierarchical diffusion helped the spread of Christianity.	Any of the following responses will earn credit: <ul style="list-style-type: none"> ▪ Leaders convert and citizens follow. When the leader of a country or empire chose to follow Christianity, the population of the region would increasingly convert to Christianity. The Roman Empire under Constantine is an excellent example. ▪ Imperialism or colonialism are causes of diffusion. When European explorers or empires conquered new lands, Christianity usually became the official religion of the region. Examples include but are not limited to Spain, Portugal, England, and France.
E. Describe how relocation diffusion explains the spread of either Hinduism or Judaism.	Any of the following responses will earn credit: <ul style="list-style-type: none"> ▪ Judaism was spread primarily through relocation diffusion, such as through the Diaspora, the emigration of Jews from Europe to the United States, and the migration of Jews from around the world to Israel. ▪ Hinduism was spread primarily via relocation diffusion. Many people moved from South Asia to other parts of the British Empire (particularly England and South Africa), and to other parts of the world (particularly to Cambodia, Indonesian islands such as Bali, East Africa, and the United States).
F. Identify the scale of analysis of the map shown and describe ONE limitation of the map.	Answers must accurately identify the scale <u>and</u> describe a limitation of the map. Any one of the following is the correct scale: Eastern Hemisphere, continental, almost global, global regional, world regional, regional. Any one of the following limitations of the image related to scale is correct: <ul style="list-style-type: none"> ▪ The map only shows the Eastern Hemisphere and not the entire world. ▪ The map does not show time, dates or any quantitative data. ▪ The map does not show zoomed in patterns for individual countries or regions. ▪ The map excludes different branches of each faith and/or many other religions of the world.

<p>G. Describe ONE specific way that when a religion diffuses to a new area it can change the cultural landscape.</p>	<p>Any of the following responses will earn credit:</p> <ul style="list-style-type: none"> ▪ Religious structures: New or existing buildings are used for religious activities. ▪ Customs, beliefs or practices: New ideas, symbols, beliefs or values are brought to an area and new festivals, holidays or housing begin to appear within communities. ▪ Food: New types of foods or even restrictions of foods may start to appear at markets or restaurants. ▪ Multiculturalism: A diversity of cultures and beliefs appear in the cultural landscape.
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UNIT 3—Review

Applying Geographic Skills, p. 190

- 1C** All three types of expansion diffusion spread cultural traits outward without migration. **Contagious diffusion** occurs when a cultural trait spreads continuously outward from its hearth through contact among people. **Hierarchical diffusion** is the spread of culture outward from the most interconnected places or from centers of wealth and influence. **Stimulus diffusion** is when an underlying idea from a culture hearth is adopted by another culture, but the adopting group modifies or rejects one trait.
- 2A** Languages and religions spread outward from hearths through various methods of diffusion. Historical processes such as imperialism and colonialism spread language and religion across the globe. Recently, communication technologies and time-space compression have caused cultural convergence.
- 3E** Spain is relatively small country so the number of speakers in the language hearth is small. However, Spain was an imperial power and its language diffused throughout the world as Spain controlled many locations from the 15th to the 19th centuries.
- 4A** Page 133 has an infographic of the cultural complex of the automobile.
Page 174 has a data table of dialects of American and British English.
Page 185 has pie charts that show English-language speakers among Hispanics in the United States.
- 5B** Spanish speakers in the United States at a national scale comprise about 15 percent of the population. At the state scale, some states, such as California, Nevada, Arizona, New Mexico, Texas, and Florida, have higher percentages of Spanish speakers. At the local scale, some large urban areas have even higher percentages of Spanish speakers.

Write as a Geographer: Write in Complete Thoughts, p. 190

1. Among the first monotheistic religions was Judaism. Others include Christianity and Islam, and possibly Hinduism.
2. Before the spread of Christianity and Islam, most people followed polytheistic religions.
3. Most religious traditions include a form of fundamentalism, in which people attempt to interpret the tradition very strictly.
4. Ethnic religions are often not active in trying to convert people to join their faith.
5. Most people in the world today practice a type of universal religion.
6. Once common, theocracies now exist in only selected countries, such as Iran.
7. The Jewish Diaspora is an example of relocation diffusion, where Jews were forced to move to other locations.
8. Sharia is the religious law associated with Islam.

9. In universalizing religions, such as Christianity and Islam, members feel a mandate to spread their beliefs to others.
10. Mecca for Muslims, Jerusalem for Jews, Christians and Muslims, and Lhasa for Buddhists are examples of cities that are sacred space for religious traditions.

UNIT 4: Political Patterns and Processes

CHAPTER 8 Political Processes and Power

TOPIC 4.1 Introduction to Political Geography

The Kurdistan Region Map, p. 196

Turkey, Armenia, Iran, Iraq, and Syria.

The Kurds would have to agree with multiple governments to gain their independence.

Reflect on the Essential Question: What are the different types of political entities, with current examples, on a world map? p. 197

Political Entity	Description of Entity
State	The formal term for country
Nation	A group of people who have certain things in common: <ul style="list-style-type: none"> ▪ a common cultural heritage ▪ a set of beliefs and values that unify them ▪ a traditional claim to a particular space as their homeland ▪ a desire to establish their own state or express self-rule in another way
Nation-state	A nation of people who fulfill the qualifications of a state
Multinational state	A country that contains more than one nation
Autonomous region	A defined area within a state that has a high degree of self-government and freedom from its parent state
Semiautonomous region	A state that has a degree of, but not complete self-rule
Stateless nation	A cultural group that has no independent political entity
Multistate nation	A nation has a state of its own but stretches across borders of other states

TOPIC 4.2 Political Processes

The Spread of Independence Map, p. 202

1945 to 1975: North Africa, Sub-Saharan Africa, and South Asia

1975 to 2015: Former USSR (Eastern Europe and Central Asia) and Southern Africa

Former Republics of the Soviet Union Map, p. 204

Eastern Europe: Belarus, Ukraine, and Lithuania (among others)

Central Asia: Kazakhstan, Uzbekistan, and Armenia (among others)

See page 113 for a justice and race lesson plan related to Topic 4.2.

Reflect on the Essential Question: What are the processes that have shaped contemporary political geography? p. 205

Process	Impact on Political Geography
Centripetal forces	Those that unify people within a country
Centrifugal forces	Those that divide people, break states apart, or even prevent states from forming
Imperialism and colonialism	<ul style="list-style-type: none"> Imperialism is influencing another country or group of people by direct conquest, economic control, or cultural dominance Colonialism is a particular type of imperialism in which people move into and settle on the land of another country.
Decolonization	The undoing of colonization, in which indigenous people reclaim sovereignty over their territory
Genocide	Organized mass killing, in which people are targeted because of their race, religion, ethnicity, or nationality, which divides countries
Devolution	One or more regions are given increased autonomy by the central political unit
Cold War and collapse of Communism	The Cold War was a period of diplomatic, political, and military rivalry between the United States and the Union of Soviet Socialist Republics (USSR or Soviet Union). This period forged alliances between blocs of countries and eventually led to the independence of numerous countries.

TOPIC 4.3 Political Power and Territoriality

Shia Regions in the Middle East Map, p. 207

Syria, Iraq, Iran, Azerbaijan, Kuwait, and Yemen

World Oil Choke Points Graphic, p. 210

About 90 percent of all globally traded goods are traded by sea and many pass through these choke points. Control of choke points gives countries economic power. If chokepoints close, transportation costs increase.

Reflect on the Essential Question: What are the concepts of political power and territoriality as used by geographers? p. 210

Political Power Territoriality Concepts	Descriptions
Cultural conflicts	People with different religions, traditions, and customs who live near each other can come into conflict if one group tries to expand its power and territory. An example would be the relationship between Sunni and Shia Muslims.
Economic conflicts	If a region has natural resources, control over those resources can bring groups into conflict. An example is the Spratly Islands and the believed petroleum reserves there.
Neocolonialism	A system where economic, political, or even cultural control is indirectly exerted over developing countries. An example would be the conditional aid to European countries the United States offered struggling nations after World War II.
Choke points	A water-based or land-based place of physical congestion between wider regions of movement and interaction. The Strait of Hormuz is an example.

Geographic Perspectives: Centripetal and Centrifugal Forces of the United States, p. 211

1. The size of the United States allows for many diverse groups and variations from region to region, which can be challenging to unite. Transportation and communication networks need to be strong.
2. Technology can act as a centripetal force by connecting people across great distances and reducing cultural variations. It could act as a centrifugal force by connecting to people from farther away which could result in poorer relationships with those nearby.
3. As people migrate internally, they take their political and cultural beliefs with them. Increased migration could reshape the political and cultural landscape of the places receiving migrants.

Think as a Geographer: Places of Importance, p. 212

1. Many of the choke points are in the Middle East and Africa. Egypt, United Arab Emirates, Oman, Iran, Djibouti, and Yemen are some of the countries that are near choke points.
2. **A.** Panama Canal: Allows for travel between the Atlantic and Pacific Oceans rather than around South America.
B. Cape of Good Hope: The point where the Indian and Atlantic Oceans meet.
C. Danish Straits: Connects the Baltic Sea to the North Sea and has become increasingly more important because the straits connect Europe to Russia's oil supply.
D. Suez Canal: Allows access between the Mediterranean Sea and the Red Sea (ultimately Indian Ocean), which creates a short cut so ships do not have to go around all of Africa.
E. Straits of Malacca: Links the Indian and Pacific Oceans and connects the economies of the Middle East to Asia.

Chapter 8 Review Questions, pp. 213–216

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	C	PSO-4.A	1.A	198–200
2	B	PSO-4.A	3.A	195
3	A	PSO-4.B	3.C	195–196
4	A	PSO-4.C	3.A	201–203
5	C	PSO-4.A	4.A	198–200
6	D	PSO-4.A	4.A	198–201
7	A	PSO-4.B	1.B	201

Chapter 8: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

After 1945 many of the countries in Africa won their independence. Today, independent states are the primary building block of not just Africa but the entire world.	
A. Identify TWO characteristics of a state.	Must correctly identify TWO of the following: <ul style="list-style-type: none">▪ states are the same as countries▪ defined boundary▪ contains a permanent population▪ maintains sovereignty over its domestic and international affairs▪ recognized by other states
B. Explain the difference between a nation and a state.	Response needs to capture at least one of the differences listed: <ul style="list-style-type: none">▪ States are political entities that are interchangeable with the word country. Countries can contain multiple nations. A state has sovereignty over its territory.▪ Nations share beliefs, values, or cultural traditions that unify the people. Nations identify with a space but may or may not have sovereignty or control of the space. Nations have a desire for sovereignty or self-determination.
C. Explain the role that imperialism played in creating the borders of modern Africa.	Must include a claim and specific details that explain how the process occurred. <ul style="list-style-type: none">▪ The Berlin Conference (Congo Conference) saw European powers divide up the continent of Africa in 1884 and 1885 forcing new borders on the people of Africa. Culture or existing boundaries were not taken into consideration. Europeans were most interested in the extraction of resources and dividing up the land for European exploitation and profit.
D. Identify a country from Africa that had a civil war after 1945 and explain ONE centrifugal force that caused the conflict. (2 points)	Any of the following responses will earn credit. Must identify the country and the force. There are more conflicts that could be used than those listed below. <ul style="list-style-type: none">▪ Sudan: political control, religious, ethnic, tribal, genocide, or resources▪ Southern Sudan: religious, ethnic, tribal, political control, or resources▪ Somalia: religious, ethnic, tribal, political control, or resources▪ Rwanda: political control, religious, ethnic, tribal, or genocide▪ South Africa: Apartheid, religious, ethnic, tribal, political control, or resources
E. Define the concept of stateless nation and provide a real-world geographic example.	Must include accurate definition and example. <ul style="list-style-type: none">▪ Definition: Ethnicities or cultural groups that desire to become a country but are not recognized as a state.▪ Examples: Palestinians, Kurds, Basques, Quebecois
F. Describe ONE example of a multistate nation.	Definition: Multistate nations exist when a nation extends across multiple countries (states). <ul style="list-style-type: none">▪ Examples: Koreans or Hungarians

CHAPTER 9 Political Boundaries and Forms of Governance

TOPIC 4.4 Defining Political Boundaries

Landlocked Countries of the World Map, p. 220

The regions with the most landlocked states are sub-Saharan Africa, Central Asia, Europe, and South Asia. Economic disadvantages of landlocked countries would be the increased cost of importing and exporting goods and lack of access to the resources of the ocean.

Politically, landlocked countries are in a weakened position when negotiating with other countries and citizens must have treaties of passage to leave their country.

Reflect on the Essential Question: What are the types of political boundaries used by geographers? p. 222

Type of Boundary	Function of Boundary
Antecedent	Established before a large population was present
Subsequent	Drawn to accommodate religious, ethnic, linguistic, or economic differences
Superimposed	Drawn by outside powers
Relic	Still evident on the landscape, but no longer divides
Geometric	Straight line or arc drawn by people that does not closely follow any physical feature
Consequent	Type of subsequent boundary that takes into account existing cultural or physical landscapes
Open	Unguarded and people can cross easily, with little or no political intervention
Militarized	Heavily guarded and discourages crossing

TOPIC 4.5 The Function of Political Boundaries

Lesotho and South Africa Map, p. 226

Communication and transportation are challenging for exclaves because they are separated from their state by another state. Access to transportation and maintaining a good relationship with the surrounding country can be difficult for enclaves.

See page 114 for a justice and race lesson plan related to Topic 4.5.

Reflect on the Essential Question: What are the nature and function of international boundaries? p. 230

Type of Boundary	Function of Boundary
Defined	Established by a legal document, such as a treaty, that divides one entity from another (with an invisible line)
Delimited	Drawn on a map by a cartographer to show the limits of a space
Demarcated	Identified by physical objects placed on the landscape
Administered	A boundary where two or more countries agree how it will be maintained, how it will function, and what goods and people will be allowed to cross
Controlled	Boundaries that have checkpoints where a passport or visa are required to enter the country
Maritime (UN Convention on the Law of the Sea)	Defined how far a country's control extends on the earth's oceans

TOPIC 4.6 Internal Boundaries

Louisiana Congressional Districts Map, p. 233

Packing

Reflect on the Essential Question: What are the nature and function of internal boundaries? p. 233

Concepts That Influence Internal Boundaries	Effects of Concepts
Internal borders	Subnational borders that divide a country into states, provinces, counties, cities, or special districts (fire, police, etc.)
Voting districts	Specific type of internal border that divides voters into subnational election regions
Reapportionment	Changes the number of representatives granted to each state to reflect the state's population
Redistricting	Changes to district boundaries within a state to guarantee districts have roughly the same number of voters
Gerrymandering	Drawing of boundaries for political districts by the party in power to protect or increase its power

TOPIC 4.7 Forms of Governance

Reflect on the Essential Question: What are federal and unitary states and how do they affect spatial organization? p. 237

Effects of Federal States on Spatial Organization	Effects of Unitary States On Spatial Organization
<ul style="list-style-type: none">▪ Shared between the central government and provincial, state, and local governments▪ Can be quicker to address and more representative of local and regional issues▪ Power is spread across the country, not consolidated in the core area	<ul style="list-style-type: none">▪ Power held primarily by the central government with very little power given to local governments▪ One set of national laws and policies▪ Clarity of national policies to other governments and the people

Geographic Perspectives: Units of Government, pp. 237–238

1. At the global scale, countries have power. At the national scale, states and provinces have power. At the local scale, counties and cities have power.
2. Many local concerns cross political boundaries. Special districts can specifically address an issue that multiple local governments might find difficult to solve. Some communities have unique needs and value certain services. One community may create a library special district but another might not.

Think as a Geographer: Demarcation and Function of Borders, p. 238

1. The Utah-Wyoming border is open; the Israeli-Palestine border is militarized; and the U.S.-Canada border is controlled.
2. When political entities have less control it shows interdependence, cooperation, and trust. When a border is more militarized it shows aggression, exclusion and tension. A controlled border is a middle ground showing that passage can occur but also has requirements for passage.

3. A country controls its borders when crises or threats exist in neighboring or nearby countries. Controlled borders also exist to monitor the passage of people and goods between countries or states.

Chapter 9 Review Questions, pp. 239–242

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	E	IMP-4.A	4.A	218–221
2	B	IMP-4.B	1.D	224
3	C	IMP-4.A	3.A	218–221
4	B	IMP-4.B	4.D	232–233
5	B	IMP-4.C	1.D	234–236
6	D	IMP-4.B	1.D	220–221
7	D	IMP-4.A	1.D	220–221

Chapter 9: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Boundaries serve a variety of purposes and exist at the international, national and local scale. Territoriality is the willingness of a person, group or country to defend their claimed space. Often claims of space can cause disagreements or even conflict. The United Nations Convention on the Law of the Sea (UNCLOS) defines the rights and responsibilities of nations.	
A. Define the concept of Territorial Seas as used in UNCLOS.	Water that extends 12 nautical miles from the coast of a country. Regarded as sovereign territory of the country.
B. Describe what activities can occur in the Exclusive Economic Zone (EEZ) as used in UNCLOS.	Coastal states can explore, extract minerals, and manage the resources of the sea out to 200 nautical miles. Activities can include fishing, mining, polluting, oil, natural gas, and exploring.
C. Using one of the maps identify TWO countries that have competing claims in the Arctic or South China Sea.	Must identify TWO countries from either the Arctic or South China Sea maps: <ul style="list-style-type: none"> Arctic: competing claims are Russia vs. the United States, Norway, Canada, Denmark, Iceland, or Finland South China Sea: competing claims are China vs. Brunei, Indonesia, Malaysia, Philippines, or Vietnam
D. Describe TWO economic reasons that explain the importance of the claims in South China Sea or Arctic Ocean.	Must accurately describe both economic reasons. Students may use one from each region or two from the same region: <ul style="list-style-type: none"> Arctic: ocean trade route from Europe to Asia, oil or mineral exploration, or economic rights to the living and nonliving natural resources of the region. South China Sea: oil, natural gas, or mineral exploration; economic rights to the living and nonliving natural resources of the region.

E. Describe ONE environmental concern affecting the oceans.	<p>Since the high seas or international waters are unregulated by specific countries, the following are potential environmental concerns:</p> <ul style="list-style-type: none"> ▪ unregulated pollution or dumping ▪ overfishing or unregulated types of fishing (whaling, trolling nets, etc.) ▪ tragedy of the commons: overuse or unsustainable use of the ocean resources
F. Describe ONE economic or environmental benefit of the Arctic Ocean for any country not shown on the map.	<p>Any one of the following is acceptable responses:</p> <ul style="list-style-type: none"> ▪ Economic: shorter trade route can lower cost of trade or international waters can provide source of fish and other natural resources. ▪ Environmental: regulates ocean temperatures, international waters source of fish and other natural resources, reflects sunlight (cooling earth), influences ocean currents which regulates climate, insulates the earth's air (cools), limits methane in atmosphere, and limits or regulates severe weather.
G. Briefly explain why choke points are politically or economically important.	<p>Any one of the following will be awarded credit, as long as it accurately explains the importance of choke points. Answer should be supported with details and examples.</p> <ul style="list-style-type: none"> ▪ Economic: Choke points provide shortcuts for trade which reduce the overall cost and time it takes to deliver goods to markets. Around 90 percent of all global goods are transported by sea. Countries that control choke points often charge fees and these areas often have greater economic development. Singapore and Panama are examples. Many choke points in the Middle East are critical to provide safe passage of oil to destinations around the world. ▪ Political: Countries that claim jurisdiction over these choke points often wield an inordinate amount of international clout. Many powerful countries will place military bases close to choke points. This allows countries to monitor the movement of military vessels of enemies.

CHAPTER 10 Challenges in the Modern State

TOPIC 4.8 Defining Devolutionary Factors

Nagorno-Karabakh Region Map, p. 248

Drawing borders based on culture can be very challenging. Political boundaries often differ from cultural boundaries which creates concentrations of people who are different from the larger group. This can lead to irredentism. People of different races and ethnicities will often live in the same neighborhoods, towns, or cities.

See page 115 for a justice and race lesson plan related to Topic 4.8.

Reflect on the Essential Question: What factors lead to the devolution of states? p. 248

Factor	Impact on Devolution
Physical geography	Can cause isolation, decrease connections, and increase the likelihood of devolution
Ethnic separatism	The advocacy of full political separation (or secession) from the larger group along cultural, ethnic, tribal, or governmental lines
Ethnic cleansing	Policy designed to remove an ethnic or religious group from a certain geographic area by violent or terrorist-related activities
Terrorism	Organized violence aimed at government and civilian targets to create fear for the advancement of political goals
Economics	Natural resources and the wealth created from them can be used for the benefit of only a portion of a population
Social issues	Concentrated pockets of a specific religion or distinct spoken language by the local inhabitants increasing division among people
Irredentism	Movement to unite people who share a language or other cultural elements but are divided by a national boundary

TOPIC 4.9 Challenges to Sovereignty

Pro-Russian Unrest in Ukraine, 2014 Map, p. 250

Crimea affords Russia seaport access to the Turkish Straits. This choke point is where much of Russia's oil, natural gas, and other exports pass. This allows Russian ships to stay in Russian controlled seas.

Reflect on the Essential Question: How do political, economic, cultural, and technological changes challenge state sovereignty? p. 257

Changes	Challenges to Sovereignty
Autonomous regions	Have a local, legislative body to govern a region with a population that is an ethnic minority within the entire country but are not fully independent
Subnationalism	A group of people who have a primary allegiance to a traditional group or ethnicity
Balkanization	The fragmentation of a state or region into smaller, often hostile, units along ethno-linguistic lines
Globalization	Global competition has created the necessity for alliances for collective benefits on a worldwide and regional scale
Supranationalism	Multiple countries form an organization for the military, economic, or social benefit of all members
Technology	<ul style="list-style-type: none"> The Internet has supported democratization or subnationalism by allowing people to organize political movements. Improved technology of firewalls that block the Internet, threatens democratization where the government has tried to limit the spread of information.

TOPIC 4.10 Consequences of Centrifugal and Centripetal Forces

Regional Distribution of Poverty in India Map, p. 259

The locations in India with the highest poverty rates are in north-central and eastern India. The lowest poverty rates are in the south and northwest. Uneven development and distribution of wealth can lead to division and fragmentation between those who have economic resources and those who do not.

Reflect on the Essential Question: How do the concepts of centrifugal and centripetal forces apply at the state scale? p. 261

Centrifugal Forces and Their Impact	Centripetal Forces and Their Impact
<ul style="list-style-type: none"> ▪ Regionalism is when loyalty to a distinct portion of a country is more important than loyalty to the entire country. ▪ Uneven economic development results in uneven benefits and the separation and fragmentation of a state. ▪ Ethnonationalism is support for the political interests of a particular ethnic group within a state, especially its national independence or self-determination. 	<ul style="list-style-type: none"> ▪ Improvements in infrastructure are one way to promote unity by increasing interaction among different ethno-linguistic groups. ▪ Nationalism, the strong feelings of patriotism and loyalty one feels toward one's country, promotes a sense of belonging, even if a country's population is an ethnically diverse one. ▪ States with a population that is <i>homogeneous</i>, one that shares a common trait, likely have cultural practices that function as centripetal forces.

Geographic Perspectives: United Kingdom and European Union, pp. 261–262

1. Older, less-educated, and unemployed people were in favor of leaving the EU.
2. Scotland, Northern Ireland, and highly populated areas near London voted to remain in the EU.
3. The people of Scotland have increased their desire for independence since the vote. People in Scotland and Northern Ireland are fearful of economic decline after Brexit. The UK and London could lose economic influence and jobs as companies move their headquarters to France or Germany. UK citizens will not be able to move as freely to and within the EU. Some believe that immigration into the UK will be easier to control.

Think as a Geographer: Labeling a Boundary Dispute, p. 263

1. The boundaries were created after war and violence and this is a very dangerous place to visit.
2. The boundary dispute was settled through negotiation and compromise, but there are still some challenges to solve. It does not send the message of violence or war.
3. Answers will vary.

Chapter 10 Review Questions, pp. 264–267

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	D	SPS-4.A	4.C	252–255
2	A	SPS-4.C	1.A	244
3	A	SPS-4.B	1.B	258–259
4	D	SPS-4.C	1.B	258–259
5	C	SPS-4.C	1.B	259–260
6	A	SPS-4.A	1.A	244–245
7	D	SPS-4.B	1.D	252

Chapter 10: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Political, economic, cultural, or technological changes can challenge a country's ability to self-rule or its sovereignty. Many boundaries in the world have changed over the past 50 years with some countries splitting into smaller countries and often choosing to join supranationalist organizations such as the European Union (EU) or the North Atlantic Treaty Organization (NATO).	
A. Describe the difference between centripetal and centrifugal forces.	<ul style="list-style-type: none"> Centripetal forces unify, bring peace, or hold a country together. Centrifugal forces disunify, cause conflicts, or tear apart countries.
B. Describe the impact of ONE cultural centrifugal force on the unity of either Canada or the former Yugoslavia.	<p>Any of the following are acceptable responses:</p> <p>Canada</p> <ul style="list-style-type: none"> Tension in Quebec resulted in a vote for separation, language sign laws, and public education in French First peoples or indigenous rights; creation of the province of Nunavut to grant more influence to indigenous peoples (Inuit) <p>Yugoslavia</p> <ul style="list-style-type: none"> Multiple language regions, such as Serbian, Croatian, and Slovak Multiple religious faiths, including Roman Catholic, Orthodox, and Islam
C. Explain how federalism might reduce tension within a country.	<p>Federalism can reduce tension by granting more political power to local communities. This allows regions to remain part of the larger country but still maintain important local laws or customs. This often results in a lessening of separatist sentiments.</p>
D. Explain how nationalism can be both a centripetal and a centrifugal force within a country.	<p>Nationalism often unifies people because they feel a sense of common identity, shared goals and a feeling of togetherness. However, many states contain multiple nations within their boundaries and nationalism can then create competing goals and identities that may pull a country apart.</p>
E. Explain ONE economic reason why many states of Eastern Europe such as Poland, Slovakia and Romania chose to join the EU.	<p>Must include a claim and specific details that answer why the pattern is occurring:</p> <ul style="list-style-type: none"> Lower cost of trade: taxes on trade (tariffs) are low. Access to European markets: better opportunities for more goods to buy or sell. Increased job opportunities or economic development: Access to jobs and opportunities throughout the EU can increase income and overall development. Ease of transactions: Common currency (Euro), and either common regulations or open borders, increase economic opportunities and reduce the cost of trade.

F. Explain ONE political reason why many states of Eastern Europe such as Poland, Slovakia and Romania chose to join NATO.	Eastern European countries have pivoted toward NATO for military protection from the Eastern European military power of Russia.
G. Describe the role that the Internet or social media has played in fueling subnational protest movements.	Subnational protest movements such as participants in the Arab Spring, Basques, Catalan, and other groups used Facebook and online resources to communicate and organize protests. The process of globalization has increased the speed and ability to organize resources and information for groups.

UNIT 4—Review

Applying Geographic Skills, p. 268

- 1D** A key concept in geopolitics is **territoriality**, or a willingness by a person or a group of people to defend space they claim. Territoriality is clear in the tensions among the Philippines, Malaysia, Brunei, Vietnam, Taiwan, and China regarding claims of sovereignty over the Spratly Islands—an isolated group of islands in the South China Sea.
- Another geographic process is **devolution**, the transfer of some political power from the central government to subnational levels of government. For example, devolution is in Spain, where multiple culturally and linguistically distinct groups exist within its border, one being the Basques. The Basque Country was granted semiautonomy in 1979 by the Spanish government.
- 2C** The Kurds have pushed for their own independent country. Challenges would be to get the numerous countries in which they live to agree to Kurdish independence and sovereignty. Many other challenges would exist, such as to define and defend their borders.
- 3C** Most new countries that have been created since 1960 were due to decolonization in Africa, devolution of former republics of the Soviet Union, and the balkanization of Yugoslavia.
- 4B** Answers will vary.
- 5A** Answers will vary. Examples include:
- Global—Federal and Unitary State Systems (page 236)
 - Regional—The Growth of NATO (page 256)
 - National—The Eight Independent States of Italy (page 199)
 - Local—Ethnic Separatism in Spain (page 245)

Write as a Geographer: Use Examples, p. 268

1. C
2. D
3. F
4. A
5. E
6. B

UNIT 5:

Agricultural and Rural Land-Use Patterns and Processes

CHAPTER 11 Origins, Patterns, and Settlements of Agriculture

TOPIC 5.1 Introduction to Agriculture

See page 116 for a justice and race lesson plan related to Topic 5.1.

Reflect on the Essential Question: What is the connection between physical geography and agricultural practices? p. 278

Elements That Influence Agriculture	Effects on Agriculture
Physical geography	Access to water, nutrient levels, landforms, and human alteration of the environment can influence agricultural production.
Climate	Nearly all land supports some type of agriculture. Some places have to overcome difficult climactic conditions to produce food.
Economic factors	Based on level of development, some farmers practice subsistence agriculture to grow enough food or raise enough livestock to meet the immediate needs of the farmer and his or her family. Others practice commercial farming to grow enough crops or raise enough livestock to sell for profit.
Agricultural regions	The level of development, climate, and type of farming in each of the 11 agricultural regions influence what is grown.

TOPIC 5.2 Settlement Patterns and Survey Methods

French Long-lot System Image, p. 281

Farms tend to be narrow in this system. Winding rivers can make surveying difficult. Soil near the river is very fertile but land away from the river is less fertile.

Reflect on the Essential Question: What are the rural settlement patterns and methods of surveying rural settlements? p. 281

Rural Land-Use Patterns	Rural Land Surveying Methods
<ul style="list-style-type: none"> ▪ Clustered, or nucleated, settlements had groups of homes located near each other in a village and fostered a strong sense of place and often shared of services, such as schools. ▪ Dispersed settlements are those in which farmers lived in homes spread throughout the countryside. ▪ Linear settlements are those in which buildings and human activities were organized close to a body of water or along a transportation route. 	<ul style="list-style-type: none"> ▪ In England, plot boundaries were described using the metes and bounds system. Metes were used for short distances and often referred to features of specific points and bounds covered larger areas and were based on larger features. ▪ In the United States, the Public Land Survey System, or township and range system, created rectangular plots of consistent size. The government organized land into townships, areas six miles long and six miles wide. Each square mile, or section, consisted of 640 acres, and it could be divided into smaller lots, such as half sections or quarter sections. ▪ French long-lot system, in which farms were long, thin sections of land perpendicular to a river.

TOPIC 5.3 Agricultural Origins and Diffusions

Reflect on the Essential Question: What are major centers of domestication of plants and animals and how have plants and animals diffused globally? p. 286

Agricultural Hearths	Diffusion Patterns from Hearth
Southwest Asia (Fertile Crescent)	<ul style="list-style-type: none">▪ North Africa▪ Southern Europe▪ Central Asia
Southeast Asia	<ul style="list-style-type: none">▪ Southeastern Asia
South Asia (Indus Valley)	<ul style="list-style-type: none">▪ Indian subcontinent▪ Southwest Asia
East Asia	<ul style="list-style-type: none">▪ North Central Asia▪ Korean peninsula
Sub-Saharan Africa	<ul style="list-style-type: none">▪ Western Africa▪ North Africa
Mesoamerica	<ul style="list-style-type: none">▪ North America▪ South America

Geographic Perspectives: Diffusion of Goods, p. 287

1. Diets would be more healthful with foods from around the world. The cost of food would likely decrease. There would be greater diversity of food choices.
2. Cultural beliefs or habits can prevent people from adopting a food common to other groups. Food norms and preferences are often developed at young ages.
3. Changes in soil nutrient levels or slight climactic differences can impact how well crops grow.

Think as a Geographer: Analyzing Rural Networks, p. 288

1. The Columbian Exchange was the global movement of plants and animals between Afro-Eurasia and the Americas.
2. A positive is that the Columbian Exchange increased the variety and amount of food available to people on both sides of the Atlantic Ocean. A negative aspect is the decimation of indigenous populations by exposure to disease.
3. Answers will vary and could include: variety and diversity of food, large animals such as cattle that helped farmers and are now a main food source, and economically profitable industry.
4. Variety of crops and livestock increased significantly. People had more access to meat and crops that had not been grown locally.

Chapter 11 Review Questions, pp. 289–291

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	B	SPS-5.B	1.A	285–286
2	D	SPS-5.B	1.A	282–283
3	B	PSO-5.B	1.A	280–281
4	A	PSO-5.A	2.B	278
5	C	SPS-5.B	1.D	285
6	D	PSO-5.B	4.A	281
7	E	SPS-5.B	1.D	282–285

Chapter 11: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

There are different types of rural settlement patterns, each one of them are created for different reasons.	
A. Identify the type of rural settlement of A, B, and C.	All of the responses must be correct to receive the point. A=linear, B=Dispersed, C=clustered or nucleated
B. Describe ONE reason why people settled in permanent rural settlements.	Any one of the following is correct. Defense, shared labor, services, location of markets to trade goods, improved proximity to water and transportation, build better residential structures, and proximity to better soil.
C. Explain ONE economic reason why people would settle in a pattern that reflects Settlement A.	Response should include a correct claim and details or examples to support the claim. <ul style="list-style-type: none"> ▪ The linear settlement creates excellent access to a river, road, or other transportation system. This facilitates trade and the exchange of goods. Being close to the transportation route lowers transportation costs. ▪ Living in close proximity to other people can create a shared labor or paid labor source to work on farms or in markets.
D. Describe one environmental reason for the settlement pattern on Settlement C.	Any one of the following is correct with supporting details and descriptions. Settlement C could be the site of a water source, better farmland, a valley, a waterfall, a navigable part of a river, or in an area protected from extreme weather.
E. Using one world region explain how technology encouraged the settlement pattern such as in Settlement B.	Response should include a correct claim and details or examples to support the claim. North America: Dispersed settlements are often the result of the Public Land Survey System that created large lots. Industrial-ages technologies such as tractors allowed for larger farms that were more spread out.

F. Explain ONE negative social aspect of the settlement pattern in Settlement B.	Response should include a correct claim and details or examples to support the claim. Dispersed settlement patterns can result in isolation and fewer social services such as medical facilities, schools, or religious institutions.
G. Describe ONE limitation of analyzing settlement patterns by using a hypothetical diagram.	Any one of the following is correct with supporting details and descriptions. Hypothetical diagrams are usually simplified and not true reflections of reality. These diagrams do not capture all of the details of every settlement pattern. Different cultures and regions may develop different types of settlement that reflect their society.

CHAPTER 12 The Second and Third Agricultural Revolutions

TOPIC 5.4 The Second Agricultural Revolution

Reflect on the Essential Question: What are the advances and impacts of the Second Agricultural Revolution? p. 295

Agricultural Advances	Impact on Farming
Mechanized technology	Reduced human labor, increased farm size, and increased yields
Chemical fertilizers	Increased crop yields per acre but also increased agricultural pollution
Crop rotation	Restored nutrients to the soil and increased crop yields
Improved irrigation systems	Provided stable and controlled water supply to crops to increase yields
Improved breeding practices	Improved selective breeding of both plants and animals resulted in greater yields

TOPIC 5.5 The Green Revolution

Increase in Grain Production by Region Graphic, p. 297

Between 1961 and 2011, East Asia had the largest increase in grain production per acre.

Most of the Green Revolution technologies, hybrid seeds, and fertilizers were developed for climates and soils different than what is found in Africa. The large continent has many regions with harsh environmental conditions. Africa is large and lacks a well-developed transportation infrastructure, so the costs of investment in research, development, and transportation were very high. Most of Africa's native crops were excluded from Green Revolution research.

See page 116 for a justice and race lesson plan related to Topic 5.5.

Reflect on the Essential Question: What are the consequences of the Green Revolution on food supply and the environment in the developing world? p. 301

Green Revolution's Consequences on the Food Supply	Green Revolution's Consequences on the Environment
<ul style="list-style-type: none"> ▪ The development of higher-yield, more disease-resistant, and faster-growing varieties of grain and other crops. ▪ Mexico and India went from wheat importing countries to those with a surplus. ▪ Yield increases from 1960 to 2000: <ul style="list-style-type: none"> ◦ wheat: 208% ◦ corn: 157% ◦ rice: 109% ◦ potatoes: 78% 	<ul style="list-style-type: none"> ▪ The intensive use of land and double (or triple) cropping, combined with more aggressive irrigation, led to soil erosion and increased environmental pollution. ▪ The use of chemicals resulted in potentially hazardous runoff into streams, rivers, and lakes, which posed serious consequences to the local ecosystems, habitats, and communities. ▪ Men owned the land, had access to financial resources, and were educated on newer methods of farming, while women were often excluded from these opportunities. This further marginalized women and limited their role within many societies. ▪ The cost of farm machinery was high and farmers in developing countries had unequal access to Green Revolution technologies.

Geographic Perspectives: Agricultural Pollution, p. 302

1. The FAOs concern is that increased use of chemical fertilizers and pesticides will pollute water supplies which endangers people who use those supplies.
2. Chemical contamination of surface and groundwater endangers marine life and humans who drink from polluted sources. Contaminated water can cause illnesses or birth defects. Crops watered with contaminated water sources can spread disease.
3. People can experience immediate or long-term illnesses from polluted water. Also, if crops are irrigated with contaminated water, food can cause illnesses.

Think as a Geographer: Compare the Second Agricultural Revolution to the Green Revolution, p. 303

1. Second Agricultural Revolution: Enclosed land use, origin of crop rotation, beginning of irrigation
Green Revolution: GMOs, hybridization
Shared: Increased mechanization, use of chemical fertilizers, improved transportation
2. Answers will vary.
3. Answers will vary.
4. Answers will vary.

Chapter 12 Review Questions, pp. 304–306

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	D	SPS-5.D	1.E	299–301
2	A	SPS-5.C	1.B	294–295
3	C	SPS-5.D	2.B	296–297
4	B	SPS-5.C	1.B	293
5	B	SPS-5.D	3.C	299–300
6	B	SPS-5.C	1.A	297–300
7	C	SPS-5.D	1.B	298–299

Chapter 12: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

The Second Agricultural Revolution (mid-1800s and early 1900s) benefitted mostly developed countries. The Green Revolution (1961 to 2011) dramatically changed agriculture in developing countries.	
A. Using the graph, identify the region and specific type of grain that increased the most between 1961 and 2011.	<p>Must get both parts correct to receive one point.</p> <p>The region is East Asia (China, South Korea or Japan). The grain is rice.</p>
B. Explain ONE environmental reason why Sub-Saharan Africa's grain production did not increase as much as other regions.	<p>Explanation must include a claim and specific details that support the claim. Any one of the following will be considered correct.</p> <ul style="list-style-type: none"> ▪ Diversity of climates or particularly harsh climates in Africa compared to other places made increases difficult. ▪ Diversity of soils made the development of fertilizers costly. ▪ Crops from Africa were not often included in Green Revolution research, which made it difficult for advancements in seeds, fertilizers, and insecticides to work in Africa's environments. ▪ Different insects, plants, and viral strains of diseases proved challenging.
C. Explain ONE economic reason why Sub-Saharan Africa's grain production did not increase as much as other regions.	<p>Explanation must include a claim and specific details that support the claim. Any one of the following will be considered correct.</p> <ul style="list-style-type: none"> ▪ Lack of suitable infrastructure to transport goods and technologies ▪ Lack of money to invest in research related to African crops, soils, seeds, or insects ▪ Lack of overall development created high investment and transportation costs

D. Describe ONE technological change that occurred in agriculture as a result of the Green Revolution.	Any one of the following will be considered correct. <ul style="list-style-type: none"> ▪ New seed technology in corn, wheat, and rice, which were often hybrids ▪ Increased and more advanced mechanization of farming ▪ New pesticides or fertilizers ▪ Strengthened infrastructure related to either irrigation or transportation ▪ Note: Genetically modified organisms (GMOs) is not correct for this question. It was a different part of the Third Agricultural Revolution.
E. Describe ONE technological change that occurred in agriculture as a result of the Second Agricultural Revolution.	Any one of the following will be considered correct. <ul style="list-style-type: none"> ▪ Mechanization of farming ▪ Transportation improvements such as trains, trucks, roads, etc. ▪ Improved large-scale irrigation ▪ Steel plow
F. Compare ONE demographic impact that occurred as a result of the Second Agricultural and Green Revolutions.	Any one of the following will be considered correct. <ul style="list-style-type: none"> ▪ Increased urbanization ▪ Decreased death rates ▪ Decreased infant mortality rates ▪ Longer life expectancies ▪ Overall population increases ▪ Rate of natural increase rises (RNI) ▪ Increased rural to urban migration
G. Describe ONE environmental impact of the Second Agricultural Revolution.	Any one of the following will be considered correct. <ul style="list-style-type: none"> ▪ Land: increased modification of the land or land used for agriculture ▪ Water: increased irrigation, increased reservoirs, changes in natural drainage of water ▪ Soils: increased salinization, contamination of soils, or desertification ▪ Systems: destruction of ecosystems or loss of biodiversity (wetlands, deforestations)

CHAPTER 13 Spatial Arrangement of Agriculture**TOPIC 5.6** Agricultural Production Regions

Reflect on the Essential Question: How do economic forces influence agricultural practices? p. 310

Economic Factors	Influence of Economic Factors
Bid-rent theory	The distance-decay relationship between proximity to the urban market and the value of the land, meaning the closer the land is to an urban center, the more valuable it is.
Intensive practices	The increasing demand for expensive inputs such as irrigation, chemical fertilizers, and improved seeds

Planting methods	<ul style="list-style-type: none"> ▪ Double (or triple) cropping is planting and harvesting a crop two (or three) times per year on the same piece of land. ▪ Intercropping, also known as multicropping, is when farmers grow two or more crops simultaneously on the same field. ▪ Monoculture is only one crop is grown or one type of animal is raised per season on a piece of land.
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TOPIC 5.7 Spatial Organization of Agriculture

Commodity Chain for Milk Production Infographic, p. 313

Step 1: Milk is produced by cows, stored briefly, and shipped to processors

Step 2: Milk is processed

Step 3: Milk is lab tested

Step 4: Milk is bottled and prepared

Step 5: Milk is transported to market

Step 6: Milk is purchased by consumers

Reflect on the Essential Question: How do economic forces influence agricultural practices? p. 314

Large-Scale Agricultural Practices	Impact of Practices
Vertical integration	This involves the ownership of other businesses involved in the steps of producing a particular good. Owning the contributing businesses gives the large farm more control of the variables and results in greater overall profits.
Economies of scale	An increase in efficiency, such as with improved seeds or new machinery, to lower the per-unit production cost, resulting in greater profits.
Commodity chains	A process used by corporations and agribusinesses to gather resources, transform them into goods, and then transport them to consumers.

TOPIC 5.8 Von Thünen Model

Bid-Rent Curve and Von Thünen's Model, p. 318

Horticulture/dairy: 0 to 2 miles

Forest: 2 to 5 miles

Grain: 5 to 17 miles

Livestock: 17 to 40 miles

Agricultural Land Use in the United States Map, p. 320

Similarities would include the locations of forests and cattle.

Differences would include the location of corn and soybeans (von Thünen's model would have them in a arc across the Midwest), cotton and tobacco (von Thünen's model would have them stretching from the Great Lakes to the Southeast), and dairy (von Thünen's model would have that in a ring in the Northeast).

See page 117 for a justice and race lesson plan related to Topic 5.8.

Reflect on the Essential Question: How is the von Thünen model used to explain patterns of agricultural production at various scales? p. 321

Concepts of the Von Thünen Model	Application of the Concepts
Location theory	The theory explores why people chose to locate economic activities in certain locations. Von Thünen applied this idea to farming activities.
Agricultural zones	Agricultural activity would be located in zones based on several factors: transportation costs, land costs, intensity of land use, and perishability of the product.
Land value	Land closest to market was most valuable and had to be used more intensely for farmers to make a profit. The farther away land was from market, the less valuable it was and could be used less intensely.
Bid-rent curve	This was used to determine the starting position and ending point for each agricultural land use relative to the market.

TOPIC 5.9 The Global System of Agriculture

Reflect on the Essential Question: How is there interdependence among regions of agricultural production and consumption? p. 326

Causes of Increased Interdependence	Effects of Increased Interdependence
Globalization of agriculture	Developed and developing countries rely on each for various products depending on factors such as demand, climate, and season of the year.
Neocolonialism	Developed countries often look to developing countries for resources or labor in producing food. Much of the revenue stays with the developed country/multinational corporation.
Fair-trade movement	Efforts to promote higher incomes for farmers in developing countries and improved conditions for agricultural laborers has increased international trade for certain goods.
Government policies	Governments can use subsidies to increase agricultural exports. When governments improve infrastructure , agricultural products can be transported more easily and cheaply.

Geographic Perspectives: Ghana as a Case Study in Development, p. 327

1. Diversifying the economy would raise income and improve living conditions for Ghanaians. Decreasing the country's economic dependency on a few raw materials (cocoa and minerals) and increasing other sectors of the economy will stabilize and improve the economy.
2. Transportation infrastructure in Ghana (primarily rail lines) connect the resources in the interior of the country to the ports where they can be transported to other parts of the world.

Think as a Geographer: Explaining Patterns in Mexican Exports, p. 328

1. Mexico exports more during the coldest months in the United States. The warmer climate of Mexico allows it to produce more crops during these months than can be produced in the United States.
2. The western side of Mexico is close to the large urban markets in California and eastern Asia. Weather patterns, such as moist wind coming from the west, might influence the growth of certain crops.
3. The concept of distance-decay is relevant. Veracruz is much closer to the United States. In addition, regions in India probably sell their products in closer markets in South Asia and East Asia.

Chapter 13 Review Questions, pp. 329–332

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	B	PSO-5.D	2.A	319–320
2	D	PSO-5.C, PSO-5.D	4.B	317–315
3	C	PSO-5.C	1.B	314
4	B	PSO-5.E	4.D	274–276
5	B	PSO-5.E	2.B	322
6	D	PSO-5.D	2.B	315–317
7	D	PSO-5.C	5.B	311–312

Chapter 13: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

There are a variety of types of agriculture that occur around the world and range from commercial to subsistent. Coffee is one of the world's most valuable traded commodities and is considered a luxury crop.	
A. Describe the difference between subsistence agriculture and commercial agriculture.	<p>Description needs to capture at least one of the differences listed. Must discuss both subsistence and commercial farming in the response.</p> <p>Subsistence Farming: Focuses on producing food for the farmer's family, produces a variety of crops, usually small-scale farms, often labor-intensive, and can be nomadic or shifting cultivation</p> <p>Commercial Farming: Focuses on producing food or industrial crops for sale or profit, often monoculture (single crop), often large-scale farms, and usually more capital-intensive, long-term dedication of land to agricultural production</p>

B. Identify TWO globally traded crops other than coffee that are currently grown on commercial plantations today.	Any TWO of the following must be listed to be considered correct. Cocoa, rubber, sugarcane, bananas, tobacco, tea, coconuts, and cotton
C. Using any of the countries listed in the sources, describe ONE advantage it has in the production of coffee.	Any one of the following will be considered correct for any of the countries. <ul style="list-style-type: none"> ▪ Tropical or subtropical climate, at an elevation of 2000 feet to 4000 feet, creating warm days and cooler nights ▪ Cheap and available labor to harvest the coffee beans ▪ Enough transportation infrastructure to transport coffee to global markets
D. Identify a world region where most of the coffee is grown for export.	Any one of the following will be considered correct. <ul style="list-style-type: none"> ▪ Highly developed countries, core countries, wealthy countries, or high-income countries ▪ Europe (any part), North America, United States, Canada, or Australia ▪ Large urban areas (world cities)
E. Explain ONE problem facing countries when they dedicate large tracts of land to the production of a luxury export crop, such as coffee.	Explanation must include an answer and specific details that support it. Any one of the following will be considered correct. <ul style="list-style-type: none"> ▪ Luxury crops often result in less land dedicated to growing crops for local consumption which increases food insecurity. ▪ International food dependence in which countries may need to import food for their population. ▪ The rise of agribusiness with a focus on global markets and profit as opposed to local interests. ▪ Subsistence farmers lose their land. ▪ Unsustainable practices are used to increase profit at the expense of damaging soil, increased pollution, or other long-term negative impacts.
F. Explain the view that coffee production is neocolonialism.	Explanation must include a claim and specific details or examples that support the claim. Neocolonialism is the use of economic, political, and social pressures to control former colonies. Most of the revenue generated from coffee remains with the transnational corporation based in the wealthy, highly developed country while very little revenue finds its way back to the coffee growers located mostly in poorer, less-developed countries. All of the countries on the chart are considered to be developing countries.
G. Describe the primary goal of fair trade in coffee production.	Any one of the following will be considered correct. <ul style="list-style-type: none"> ▪ Promote higher incomes for producers (farmers) ▪ Provide a bigger share of revenue to producers and growers in the developing world ▪ Advocate for more sustainable farming practices

CHAPTER 14 Understanding the Challenges and Consequences of Agriculture

TOPIC 5.10 Consequences of Agricultural Practices

Deforestation in Brazil Photos, p. 335

More land has been deforested in the 2012 image compared to the 2000 image. Farmland has increased dramatically especially near roads and transportation routes.

Agricultural Data, 2017, Table, p. 342

The percent of people employed in agriculture is very significant to the economies and people of Afghanistan and Ghana compared to those of the United States and Canada. The GDPs and livelihood of individuals and their families of Afghanistan and Ghana are much more dependent on agriculture than those of the United States and Canada.

Reflect on the Essential Question: What are the environmental and societal consequences of agricultural practices? p. 342

Agricultural Practices	Impact on Environment or Safety
Terracing	<ul style="list-style-type: none">▪ The reduction in water running down the hillside limits soil erosion.▪ If terraces are not carefully maintained, a heavy rainfall can cause disastrous and deadly mudslides.
Irrigation	<ul style="list-style-type: none">▪ Irrigation systems can turn deserts and semi-arid regions into productive farmland.▪ Dams can destroy river ecosystems and people are often displaced from their land when the reservoirs are created.▪ It can disrupt the natural drainage of water and reduce the normal regeneration of soils caused by natural flooding.▪ Overwatering leads to water contaminated with chemicals seeping into rivers and underground water systems.
Draining wetlands	<ul style="list-style-type: none">▪ This practice can cause a loss biodiversity in both plants and animals.▪ Natural filters that protect surface water and groundwater quality are destroyed.▪ Benefits of trapping sediment and protecting against shoreline and stream bank erosion are lost.▪ The advantage wetlands provide of averting flood damage during periods of potential flooding is prevented.▪ The loss of reducing greenhouse gases by building and storing soil carbon.
Deforestation	<ul style="list-style-type: none">▪ Cutting down trees can result in local problems, such as soil erosion, decreased rainfall, warmer temperatures, and desertification.▪ Rainforests absorb so much carbon dioxide that shrinking them leads to an increase in atmospheric carbon dioxide, which contributes to worldwide climate change.
Shifting cultivation	<ul style="list-style-type: none">▪ The possibility of soil erosion increases when shifting cultivation is practiced.▪ This type of agriculture on a large scale does not allow the ecosystem to recover, causing permanent damage.
Pastoral nomadism	<ul style="list-style-type: none">▪ If the livestock are not moved at that point, then overgrazing can lead to desertification.▪ This type of agriculture can make the soil more susceptible to wind erosion.

TOPIC 5.11 Challenges of Contemporary Agriculture

The Growth of Aquaculture Graph, p. 345

The quantity of fish produced in aquaculture has grown continuously and has more than doubled since 1970. The quantity of wild-catch fish grew at a similar rate to aquaculture until the 1990s, and since, its growth has leveled off and is projected to continue at a similar rate.

Reflect on the Essential Question: What are the challenges and debates related to the changing nature of contemporary agriculture and food-production practices? p. 355

Contemporary Agriculture and Food Production Practices	Associated Challenges with Practices
Biotechnology and GMOs	Many countries, particularly in Europe, have restricted the use of GMOs due to concerns about cost, creation of superpests, and potential long-term risks to consumers.
Aquaculture	Concerns exist about parasites, dangers to ecosystems, competition with native stocks, and concentrations of waste in bodies of water.
Use of agricultural chemicals and fossil fuels	<ul style="list-style-type: none">▪ If too many chemicals are applied, the excess can contaminate nearby water supplies, causing significant environmental damage, including growth of toxic algae that uses the oxygen in the water, which kills fish and other organisms.▪ If pesticides, insecticides, and herbicides are used or disposed of incorrectly, they can cause significant damage to other life forms, including humans.▪ Using antibiotics on animals to promote growth can lead to the development of antibiotic resistant bacteria, or superbugs, that could be transferred to humans and lead to serious illnesses.▪ The use of fossil fuel powered machines results in air pollution from the exhaust, depletion of fossil fuel reserves, and leaks or spills of various petroleum products that can contaminate soil and water.

TOPIC 5.12 Women in Agriculture

Property Rights for Women, 2017 Map, p. 358

Women in countries in Africa, the Middle East, South Asia, and Southeast Asia face the most discrimination in owning property.

Those countries commonly have higher percentage of people who live in poverty and who deal with food insecurity.

See page 118 for a justice and race lesson plan related to Topic 5.12.

Reflect on the Essential Question: What are the variations in female roles in food production and consumption? p. 358

Challenges Due to the Role of Females in Food Production and Consumption	Contemporary Solutions
Women lack decision-making power	Especially in periphery countries, where the majority of economically active women are employed in farming, women have assumed increased responsibilities. Increasingly, men are taking nonfarming jobs in urban areas, leaving women to run farms.
Women are denied training in new farming techniques	Opportunities for women to receive education and training on new equipment has increased especially in developing regions.
Female farmers are denied access to capital and financial opportunities	Nongovernmental organizations (NGOs) provide women with microloans.

Geographic Perspectives: Farmers' New Sources of Revenue, pp. 359–360

1. Agritourism and producing organic foods
2. Organic foods are often sold locally, and people are willing to pay a higher price for organic food which can result in more profit for farmers.
3. Organic food is commonly sold in concentrated areas where the population is wealthier. Also, organic food is often consumed within 100 miles of where it is grown. Growing organic foods is more expensive and most people cannot afford or willing to pay the higher cost.

Think as a Geographer: Use Scale to Analyze Fair Trade, p. 360

1. The principles of fair trade apply to families that grow food for their household use. They can use the food to alleviate poverty and set their own standards for safe working conditions. Since they are not selling their produce, they are not concerned about fair pricing. They can set their own standards for safe working conditions and environmental responsibility rather than needing to compete with others who will apply lower standards.
2. A farmer's market provides consumers a chance to purchase products directly from the farmer.
3. The quantity imported of each of the four products increased significantly in the years that had data.
4. Producers in periphery countries have an opportunity to make higher profits. Multinational companies face competition for their products. Consumers in highly developed countries have greater choice for the type of agricultural production system they want to support.

Chapter 14 Review Questions, pp. 361–363

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	D	IMP-5.A	4.A	336–337
2	D	IMP-5.A	4.E	336
3	A	IMP-5.A	1.A	338
4	A	IMP-5.B	1.B	343–344
5	A	IMP-5.A	2.A	339
6	A	IMP-5.C	1.D	300
7	C	IMP-5.B	4.C	298–299

Chapter 14 Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

There have been many changes in the production, distribution, and marketing of food over the past few decades.	
(A) Explain why farmers using GMOs often use less insecticides and pesticides than farmers growing traditional crops.	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <p>GMO crops often are developed at the genetic level to be resistant to pests and insects thereby reducing the need to spray or use additional pesticide or insecticides during the growing process. Scientists in labs add or modify the plant at the genetic level to resist pests and insects.</p>
(B) Explain why some people consider supporting the local-food movement to be more environmentally friendly than purchasing food from a large grocery chain.	<p>Explanation must include a claim and specific details or examples that support the claim</p> <p>Advocates of local food movements argue that locally produced foods decrease the carbon footprint caused by longer routes of transportation (trucks, boats, planes, etc.). Food purchased at large chains is often produced far from the store and may travel thousands of miles to its destination market.</p>
(C) In order to increase profits some farmers are relying on value-added farming. Identify an example of value-added farming.	<p>Any one of the following is acceptable:</p> <ul style="list-style-type: none"> Organic crops or foods, passion fruit, cherimoya, longan, and star fruit. Additionally, grass-fed beef and free-range chickens and eggs. Turning strawberries and other fruits into jams and jellies or using tomatoes and peppers to produce salsa, are also examples. Dairy producers create added value by making and selling their own cheese or ice cream.

(D) Describe how community-supported agriculture typically works.	<p>Answer must include a claim and specific details or examples that support the claim.</p> <p>Producers and consumers form a type of partnership. Consumers buy a share or subscribe to a certain quantity of crops for a season. The food is made available to the consumer throughout the growing season. This ensures the consumers a local supply of fresh products and the farmer receives revenue throughout the season, rather than only at the end. It also allows for a connection between consumers and producers because consumers can often participate in the process of growing and harvesting.</p>
(E) Describe TWO differences between a coffee plantation and a fair-trade coffee farm.	<p>Answer must describe two differences and support with specific details or examples.</p> <ul style="list-style-type: none"> ▪ Fair trade promotes higher incomes for producers and more sustainable farming practices. The goal of a commercial coffee plantation is primarily profit for the company or multinational corporation. ▪ Fair-trade coffee farms are often locally owned and operated while most coffee plantations are owned by a large-scale company. Its workers may be local. But its management is often not local.
(F) Compare the food purchasing options available to people living in a food desert and a suburban area of a city.	<p>Answer must compare (similarities or differences) and support with specific details or examples that support the comparison.</p> <ul style="list-style-type: none"> ▪ Food deserts: Fast food and heavily processed foods are more common in food deserts. Some healthy option may be available at convenience stores, but the cost is much higher than at a larger grocery store. ▪ Suburban stores: These stores provide a wide variety of healthful and affordable food choices and people have adequate wealth and transportation to get customers to stores. There are more fresh fruits and vegetables and far more choices of less processed foods and more reasonable prices than in food deserts.

UNIT 5—Review

Applying Geographic Skills, p. 364

1E The von Thünen model's strengths are its application over time and a wide range of agricultural products it covers. The model's weaknesses are in several of the assumptions of von Thünen, such as an isotropic plain and a single market. A limitation is the model can't be used in all areas because they differ from where von Thünen created the model.

2D Answers will vary. Some possibilities are below:

Similarities: Farmers in both areas modify the natural environment. They grow many different types of crops and raise a variety of animals in both types of places. There are subsistence and commercial farming activities in both core and periphery areas (although the ratios differ).

Differences: Core regions have considerably more mechanization and technology. Core areas are more likely to have large-scale farms/agribusinesses and commercial farms.

A much larger percentage of the population tends to farm in periphery countries. Periphery areas practice more subsistence farming.

- 3B** Map on page 328. The areas that have high levels of fruit and vegetable exports are along the west coast. There are fewer fruit and vegetable exports from central Mexico and along the east coast.

Data table on page 342. The percentage of GDP accounted for by agriculture in United States and Canada is very low. The percentage of people in Afghanistan and Ghana that participate in agricultural labor is very high.

- 4C** The images of the Aral Sea show it shrinking over time. The central portion and eastern edge of the lake shows the most change. Poorly managed efforts by the Soviet Union to divert water for irrigation projects caused the body of water to become very small. Much of the area is now considered a desert and unable to support farming.

- 5C** Small-scale farms will be a few acres or less, while large-scale farms can be thousands of acres. Most of the good produced on small-scale farms are consumed by the farmer (and family) or locally, while large-scale farms often sell goods nationally or globally. Small-scale farms have a need for low amounts of capital, while large-scale farms invest large amounts of capital in equipment and other resources. Occasionally small-scale farmers will sell their products to large-scale agricultural companies and then these companies export the crop to the global market.

Write as a Geographer: Use Relevant Information, p. 364

1. relevant
2. This statement is not relevant because it is about Brazil.
3. relevant
4. relevant
5. relevant
6. This statement is not relevant because the language spoken by farmers does not influence their decisions about what crops to grow.

UNIT 6:

Cities and Urban Land-Use Patterns and Processes

CHAPTER 15 Origin, Distribution, and Systems of Cities

TOPIC 6.1 The Organization and Influence of Urbanization

The Denver Metropolitan Area Map, p. 370

Answers will vary.

See page 119 for a justice and race lesson plan related to Topic 6.1.

Reflect on the Essential Question: What are the processes that initiate and drive urbanization? p. 374

Identify the Processes that Initiate and Drive Urbanization	Explain the Processes that Initiate and Drive Urbanization
Site and situation	Site describes the characteristics at the immediate location and situation refers to the location of a place relative to its surroundings and connectivity to other places. The site and situation of a city influences its function.

Population characteristics	People are drawn to urban areas often from rural areas, other regions, or other countries, looking for jobs and opportunities. For these reasons, social heterogeneity is particularly high in cities, meaning that the population of cities, as compared to other areas, contains a greater variety of people.
Transportation	Urban areas have expanded as trains, buses, and cars have enabled people to move farther from the center of the city, but still visit or work in the city. That change illustrates how time-space compression , in the form of transportation improvements, has led to urban growth.
Communication	Changes in communication technology have dramatic impacts on the growth and development of cities. Historically, cities connected to trade routes received information first. Today, advanced communication networks are essential to attract large corporations, factories, or high-tech companies to an urban area in order to encourage further economic growth.
Migration	Rural-to-urban migration is an important concept to understand the growth of cities. People are attracted to more densely populated cities to obtain higher paying jobs and more government services.
Government policies	Economic and political leaders, at the national and local scale, develop policies to guide and encourage the growth of cities. Cities can have a variety of different functions and economic emphases. Local policies that create economic incentives, such as low-cost loans, lower taxes, or cheap available land, are used to encourage economic development.

TOPIC 6.2 Cities Across the World

Reflect on the Essential Question: What are the processes that initiate and drive urbanization and suburbanization? p. 379

Processes that Influence Urbanization and Suburbanization	Effects of Those Processes
Economic expansion	Greater purchasing power for families after World War II and government incentives to buy homes in suburbs.
Racial tension	Increased numbers of African Americans came to the north during World War II in search of jobs and resulted in many White Americans moving to the suburbs in what became known as "White flight." Continued government investment in suburban growth, along with a lack of investment in inner cities, hastened both urban decline and suburban growth. Industries and jobs left the cities, and residents followed.

(Continued)

Sprawl	This is the rapid expansion of the spatial extent of a city which occurs because of low land costs, low-density housing, and the growth of car culture. Sprawl is encouraged by leap-frog developments when developers purchase land and build beyond the edge of a city's built area.
New forms of land use	<p>New land uses have been created by suburbanization:</p> <ul style="list-style-type: none">▪ Boomburbs, or boomburbs, are rapidly growing communities, have a total population of over 100,000 people, and are not the largest city in the metro area. These areas usually do not have a dense urban center.▪ Edge cities are nodes of economic activity that have developed in the periphery of large cities.▪ Exurbs are the prosperous residential districts beyond the suburbs.▪ Some suburbanites return to live in the city, in a process called reurbanization.

TOPIC 6.3 Cities and Globalization

Reflect on the Essential Question: How do cities influence the processes of globalization? p. 381

Characteristics of Cities	Global Influence of Characteristics
World city (global city)	These cities are currently media hubs, cultural leaders, and financial centers with influential stock exchanges, banks, corporate headquarters, or headquarters of international organizations.
Urban hierarchy	This is the ranking of cities, based on influence or population size. For a city to be influential, it must have <i>connectivity</i> , or be connected to regional, national, and global networks.
Nodal cities	These cities are command centers on a regional and occasionally national level. These cities will have some corporate headquarters and numerous regional offices for transnational companies, while they also serve as major entertainment, cultural, and economic centers within their regions.

TOPIC 6.4 Size and Distribution of Cities

Two Primate Cities: London and Mexico City Table, p. 383

The largest city in both locations has a population that is considerably more than twice that of the next largest city.

The people of Mexico will have more difficulty acquiring services since the country has a poor transportation network which will limit people's ability to travel to where services are located.

Reflect on the Essential Question: What are the different urban concepts such as hierarchy, interdependence, relative size, and spacing that are useful for explaining the distribution, size, and interaction of cities, p. 386

Urban Concepts	Application of Concepts for Cities
Urban hierarchy	The ranking of cities based on influence or population size. Globally, world cities are at the top of the influence hierarchy and megacities/metacities are at the top of the population hierarchy. Nationally or regionally, rank-size rule and primacy of a city determine the hierarchy.
Interdependence	The gravity model states that larger and closer places will have more interactions than places that are smaller and farther from each other. This model can be used to predict the flow of workers, shoppers, vacationers, migrants, information, mail, products, economic activity, and nearly any other flow between cities. The model holds that there are more numerous flows to bigger cities and between nearer cities.
Relative size	The rank-size rule describes one way in which the sizes of cities within a region may develop. It states that the n^{th} largest city in any region will be $1/n$ the size of the largest city. That is, the rank of a city within an urban system will predict the size of the city.
Spacing	The central place theory explains the distribution of cities of different sizes across a region. The model uses consumer behavior related to purchasing goods and services to explain the distribution of settlements. Central place is a location where people go to receive goods and services. The distance people will travel to obtain specific goods or services is range . The model accurately concludes that larger cities will be farther spaced from each other than smaller town or villages.

Geographic Perspectives: Urban Life in 2040, p. 387

1. Answers will vary. New technology will reduce the friction of distance and edge cities and exurbs will likely become more common in U.S cities. Also, migration to large cities will continue and likely grow, which will make cities even more diverse.
2. As populations continue to grow, epidemics, pollution, crime, civil unrest, and health problems will likely increase in Asian and African cities. Also, growing populations will make environmental challenges even more difficult.

Think as a Geographer: Comparing Metropolitan Regions, p. 388

1. Asia has the most megacities, six out of the ten largest.
2. Often, periphery and semiperiphery countries have high birth rates and rural-to-urban migration is becoming increasingly common in those areas.
3. The relative sizes of the urban area and the main city might be influenced by whether geographic features established natural boundaries for cities and by how easily the legal system made it for growing cities to annex neighboring communities.

Chapter 15 Review Questions, pp. 389–392

Page	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	D	PSO-6.A	3.C	371–372
2	B	PSO-6.A	1.A	367–368
3	A	PSO-6.A	1.D	368–370
4	C	PSO-6.A	1.B	368–369
5	B	PSO-6.A	1.D	369–370
6	B	PSO-6.C	3.A	382–383
7	E	PSO-6.C	3.C	384

Chapter 15: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

The geography of urban areas around the world is rapidly changing. Megacities and world cities are a way of clarifying different types of cities today.	
(A) Define a metacity.	<p>Definition should include the following details to receive the point.</p> <p>Metacity is defined in two ways (either is acceptable):</p> <ul style="list-style-type: none"> ▪ Continuous urban area with a population greater than 20 million people ▪ Attributes of a network of urban areas that have grown together to form a larger interconnected urban system. Sometimes called hypercities.
(B) Explain the concept of world city using either economic or political characteristics.	<p>Explanation must include a claim and specific details or examples that support the claim. A world city, or global city, is one that exerts influence far beyond its national boundaries.</p> <ul style="list-style-type: none"> ▪ Economic: Characteristics might include that these places are financial centers with influential stock exchanges, banks, and corporate headquarters. ▪ Political: Characteristics might include that these places are influential media hubs or are headquarters to international organizations, such as the United Nations in New York.

<p>(C) Using the tables, compare the distribution of metacities to world cities.</p>	<p>Comparison must include a claim and specific details or examples about both metacities and world cities.</p> <ul style="list-style-type: none"> ▪ The largest metacities are commonly in semiperiphery countries (4 out of 5), while world cities are all in core countries. ▪ Metacities are more likely to be in periphery or semiperiphery countries compared to world cities. Reasons are related to high birth rates and high rural-to-urban migration in less-developed countries. <p>On the chart, world cities are all in core countries as they need more advanced levels of development to support the economic and political characteristics.</p> <ul style="list-style-type: none"> ▪ Tokyo is the only city on both charts. This is because Tokyo is a primate city for Japan and developed as a center of industry, trade, and finance for Asia following World War II.
<p>(D) Choose ONE of the world cities from the table and explain an economic reason why the city has become such a powerful city.</p>	<p>Explanation should include the details or examples listed.</p> <ul style="list-style-type: none"> ▪ London has economic institutions such as Lloyd's of London (insurance), the London Stock Exchange, and the Bank of England. ▪ New York City has economic centers such as Wall Street, the New York Federal Reserve Bank, and the New York Stock Exchange. The international headquarters of the United Nations is located there. ▪ Tokyo is the home to Japan's financial markets and numerous multinational corporations. ▪ Paris has the economic influence of the Paris Stock Exchange and the European Banking Authority. ▪ Singapore dominates Asian financial activities. It has the Stock Exchange of Singapore and many international banks. <p>Note: All of the cities contain regional or global headquarters for multiple transnational companies that make decision on global production, manufacturing trade logistics, and financial resources.</p>
<p>(E) Choose ONE of the metacities from the table and explain either an environmental or social problem it faces.</p>	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ Tokyo deals with heat island effect, air pollution, and waste management as a result of its high population. ▪ New Delhi has an air pollution issue as well as lack of drinking water. ▪ Shanghai deals with traffic congestion and air pollution problems. ▪ Mexico City has chemical pollution and waste problems from industrial production. ▪ Sao Paulo deals with water pollution and disease resulting from overcrowding. <p>Note: All of the cities on the chart are going to deal with the general problems of overcrowding and pollution. The list below will give more specific problems.</p>

(F) Explain ONE political or social reason why suburbanization has occurred so prevalently in United States cities since the 1950s.	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <p>Political Reasons:</p> <ul style="list-style-type: none"> ▪ Agreeable mortgage loans provided to families by the government ▪ Construction of roads and a new highway system ▪ Government was unwilling to stop the practice of redlining by banks and real estate companies <p>Social Reasons:</p> <ul style="list-style-type: none"> ▪ Growth of car-centered lifestyle allowed families to live away from their place of work ▪ Racial tensions and concept of “White flight”
(G) Describe the role that transportation has played in the suburbanization of United States cities since the 1950s.	<p>Description must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ New highways allowed Americans to live farther away from their workplace and easily make the daily commute. ▪ Increasing dependence on automobiles, which had become more available to all Americans, allowed for the commute not only to work, but also to social events in urban areas.

CHAPTER 16 Urban Structure**TOPIC 6.5** The Internal Structure of Cities**Middle Eastern and Islamic Cities Market Photo**, p. 399

Answers will vary.

See page 120 for a justice and race lesson plan related to Topic 6.5.

Reflect on the Essential Question: How do various models and theories explain the internal structure of cities? p. 402

Model or Theory	City Structures Within Model
Concentric zone model	Describes urban areas in North American cities. The first ring surrounding the central business district (CBD) is a transition zone that mixes industrial uses with low-cost housing. Manufacturing benefits from proximity to the city-center workers and affordable land. Housing in this zone is often high-density, consisting of older, subdivided homes.
Hoyt's sector model	Another North American city model that described how different types of land use and housing were all located near the CBD early in a city's history. Each grew outward as the city expanded, creating wedges, or sectors of land use, rather than rings. Hoyt's model describes sectors of land use for low-, medium-, and high-income housing.
Harris and Ulman multiple-nuclei model	A North American city model that describes the functional nodes or centers. Characteristics of each node either attracted or repelled certain types of activities. The result was a city that consisted of a patchwork of land uses, each with its own center, or nucleus.

Galactic city model	An original CBD became surrounded by a system of smaller nodes that mimicked its function. As suburbs grew, they took on some CBD functions. At key locations along transportation routes, people created mini-downtowns of hotels, malls, restaurants, and office complexes.
European city model	City walls, which were built for protection before the wide use of gunpowder weapons, restrained growth. These cities grew slowly and with little planning for centuries. The result is now a dense mix of commercial and residential land use with narrow, winding streets. Distinct land-use zones are difficult to find in the core areas of these cities. Later urban renovations cut through areas to produce elegant, wide boulevards with high-quality housing and shops.
Middle Eastern and Islamic city model	Dominating these cities is a central mosque that includes one or more tall and highly visible minarets, or tall slender towers. Many Islamic cities were built with a defensive citadel , a fort designed to protect the city, with its related palace and barracks for soldiers. Major roads connect the gates of the citadel to the city center. Along these roads are traditional outdoor markets or covered bazaars, called suqs .
Latin American city model	There is a two-part CBD at the center of the city—a traditional market center adjacent to a modern high-rise center. The high-quality housing there extends outward from the urban core, accompanied by a commercial spine of development. The outer ring of the city, the periférico , shows poverty, lack of infrastructure, and areas of poorly built housing known as shantytowns . The model notes the possible presence of an industrial node closer to the commercial spine.
African city model	New cities have been built next to or on top of existing ones. The traditional CBD , which existed before European colonization, has small shops clustered along narrow, twisting streets. The colonial CBD has broad, straight avenues and large homes, parks, and administrative centers. There are periodic markets , where small-scale merchants congregate weekly or yearly to sell their goods. A zone of mining and manufacturing is often found in cities. Residential zones are often based on ethnicity.
Southeast Asian city model	The focus of the modern city is often a former colonial port zone. This export-oriented zone shares commercial uses similar to the CBD in North American cities. Additionally, these cities might include a government zone. If the city is a national or regional capital, it might have a commercial zone dominated by foreign merchants and ambassadors. A belt of market gardening often surrounds and supplies these cities.

TOPIC 6.6 Density and Land Use

McMansion Image, p. 404

An advantage may be that newer homes in these neighborhoods may increase the value of property. A disadvantage is older residents and minority residents often lose the ability to purchase property in these neighborhoods. The character and cultural landscape of a neighborhood may change.

Reflect on the Essential Question: How do low, medium, and high-density housing characteristics represent different patterns of residential land use? p. 405

Types of Residential Land Use	Characteristics
High-density	Apartment buildings and townhomes dominate this residential zone, sometimes known as the inner city in the United States.
Medium-density	This zone has suburbs that are often characterized by single-family detached houses. Many suburbs are noticeably homogenous in terms of housing size and style.
Low-density	Large plots of land and fewer homes (and businesses) characterize these usually rural areas.

TOPIC 6.7 Infrastructure

Reflect on the Essential Question: How does a city's infrastructure relate to local politics, society, and the environment? p. 409

Element of Infrastructure	Importance to Society
Municipality	This refers to a local entity that is all under the same jurisdiction. The municipal government is responsible for managing infrastructure at the local scale, although the federal government often subsidizes large expenses.
Economic development	Building, repairing, and replacing infrastructure is costly and, in a busy urban setting, disruptive to people who live and work there. Some cities are located in wealthier countries and, therefore, can spend more money on developing, maintaining, and improving infrastructure.
Social development	Improvements in infrastructure dramatically improve the living conditions in the poorest areas of the world. Expanding access to improved areas of infrastructure, such as educational opportunities and healthcare, helps to strengthen society.
Transportation	Dense population, combined with the high number of suburban residents who commute to central cities for jobs each day, makes public transportation valuable to the residents of cities.

Geographic Perspectives: Where the Wealthy Choose to Live, p. 410

- Answers will vary.
- In Europe and Canada, wealthy and more educated people have traditionally chosen to concentrate in densely populated central cities. Recently, more wealthy people in Europe and Canada are moving to the suburbs. In contrast, in the United States, wealthy and more educated citizens have been more likely to choose to live in suburbs where population densities are lower. The attractions of spacious homes, large yards, and clean air have outweighed the longer commute to work.
 - Proximity to entertainment venues, such as museums, theaters, and sports facilities
 - Childcare options, public transportation, access to schools and public parks
 - Proximity to entertainment, recreation, restaurants, health care facilities, and parks

Think as a Geographer: Data and Infrastructure Planning, p. 411

1. Cook County is relatively large and elongated while Marion County is relatively small and nearly square. The different needs of opposite corners of Cook County might be far greater than the differences in needs of opposite corners of Marion County. As a result, providing county services equally might be easier to accomplish in Marion County.
2. Cook County is divided by many municipal boundaries within the county, but Marion County has no internal municipal boundaries. Because of this difference, the Marion County government is essentially like a city government.
3. Cook County is more than five times as populous as Marion County, which might help explain why it has far more municipalities.
4. Because Cook County includes 135 municipalities, while Marion County includes only one, the potential for conflicts between county and municipal government is far higher in Cook County. The Cook County government needs to be more concerned about working together effectively with city governments.

Chapter 16 Review Questions, pp. 412–415

Page	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	E	PSO-6.D	4.A	394–400
2	C	PSO-6.D	1.B	394
3	A	PSO-6.D	2.B	398
4	A	PSO-6.D	2.B	400–401
5	E	PSO-6.D	2.D	398–399
6	D	PSO-6.D	4.B	400
7	C	PSO-6.D	2.E	398–399

Chapter 16: Free-Response Scoring Guideline

All parts of the questions are worth one point each. This essay is worth 7 points total.

The diagrams show three early models of urban development and land use in North America.	
A. Using the sector model, explain the rationale for the location of the industrial sector.	<p>Explanation should include several of the following details to receive the point.</p> <ul style="list-style-type: none">▪ The industrial sector is located next to the transportation sector for the efficient and cheap movement of goods from the industrial sector.▪ The low-income residential sector is next to the transportation sector, but close enough to provide the labor for the industrial sector within an acceptable range.▪ The industrial sector might benefit from the proximity of the moderate-income sector located on the other side of it as a source of middle-class labor.

<p>B. Choose one of the models and explain in detail the rationale for a different specific land use location.</p>	<p>Explanation must include a claim and specific details or examples that support the claim. The concentric zones model has a series of rings surrounding the CBD, each with its specific characteristics and purpose.</p> <ul style="list-style-type: none"> ▪ The transition zone has industrial uses and usually affordable land with some lower-cost housing ▪ The low-income residential zone has older homes with high population density ▪ The moderate-cost residential zone has slightly more valuable housing and less population ▪ The commuters' zone is for the population with the most resources and housing is most expensive, where population density is lowest
<p>C. Describe TWO similarities that North American models share in how they describe land use.</p>	<p>Answers must include two from the list.</p> <ul style="list-style-type: none"> ▪ CBDs (central business districts) are near or at the center of the land <ul style="list-style-type: none"> ◦ Homes and property size become larger as you move away from the CBD because land is cheaper on the edges of cities than near the CBD ◦ Cars become the dominant form of transportation for people living in the outer zones of the cities ▪ Newer housing is farthest away from CBDs ▪ Least-valuable housing is near/next to the industrial areas ▪ Areas not dedicated to housing or industry are close to the higher-value housing
<p>D. Using the multiple-nuclei model, explain why some businesses relocate near the suburbs.</p>	<p>Description should include the details or examples listed.</p> <p>In this model there isn't just the traditional CBD at the center, but numerous zones of industry mostly near suburbs. Businesses relocate near suburbs to be near a port, airport, or some other transportation junction. This growing industrial node could attract other related businesses and possibly areas of housing.</p>
<p>E. Compare these models with one pattern of urban development and land use on a continent other than North America and account for the differences.</p>	<p>Description must include a claim and specific details or examples that support the claim for the Griffin-Ford Model used for Latin American cities:</p> <ul style="list-style-type: none"> ▪ It includes two CBDs—one at the traditional market center and a commercial one that is a modern high-rise center. The North American models have one CBD. ▪ The most-valued housing is near the commercial center, not away from it as in North American models. ▪ The quality of housing decreases with distance from the CBDs. In the North American models, it increases with distance. ▪ The quality of services decreases with distance from the CBDs. In the North American models, the quality of services increases with distance. ▪ Other models that can be compared are ones based on European, African, Middle Eastern, or southeast Asian cities.

F. Describe ONE positive of zoning regulations related to urban planning.	<p>Description must include an answer and specific details or examples that support it.</p> <ul style="list-style-type: none"> ▪ Zoning can give people with different interests what they want without conflict. For example, the quiet of a residential zoned neighborhood could compete with the noise of an industrial zoned area. ▪ Zoning can promote the growth of communities. ▪ Zoning can foster or prevent changes in land use. ▪ In residential zones, neighborhoods can be created to meet specific wants of the residents. ▪ Zoning can separate more dangerous industrial or commercial uses from residential or large-scale publicly used areas.
G. Describe ONE negative of zoning regulations related to urban planning.	<p>Description must include an answer and specific details or examples that support it.</p> <ul style="list-style-type: none"> ▪ Zoning can be used to prevent socioeconomic diversity or ethnic diversity in neighborhoods, intentionally or unintentionally. ▪ The residential density gradient can be created by zoning that promotes higher population density and lower-value housing near the CBD. ▪ Businesses tend to move to the areas that are zoned for more-valued housing, which can create fewer jobs, consumer choices, and services in less-valued areas. ▪ Zoning can be used to prevent common sense mixed use residential and light commercial uses that foster walkable and diverse communities.

CHAPTER 17 Urban Challenges and Sustainability

TOPIC 6.8 Urban Sustainability

Feltham, England Photo, p. 418

Greenbelts limit a city's growth and preserve farmland while providing an area for people to enjoy recreation and the environment.

Reflect on the Essential Question: What are urban design initiatives and practices and what are the effects of those initiatives and practices? p. 421

Urban Design Initiatives and Practices	Effects of Initiatives and Practices
Smart-growth policies	Smart growth focuses on city planning and transportation systems of an urban region and includes many goals: slow sprawl by creating concentrated growth in compact centers, create attractive and walkable residential neighborhoods, develop a strong sense of place, increase livability, and involve residents and stakeholders in decisions that impact the community.
Greenbelts	Greenbelts are intended to limit a city's growth and preserve farmland while providing an area for people to enjoy recreation and the environment.

(Continued)

Slow-growth cities	Slow-growth cities have implemented policies to slow the outward spread of urban areas and place limits on building permits in order to encourage a denser, more compact city.
New urbanism	New urbanism strategies include creating human-scale neighborhoods (designed for optimum human use), reclaiming neglected spaces, giving access to multiple modes of transportation, increasing affordable housing, and creating mixed-use neighborhoods .
Urban infill	Urban infill is the process of building up underused lands within a city. Most cities have areas of vacant or undeveloped land of varying sizes.
Transit-oriented development (TOD)	TOD locates mixed-use residential and business communities near mass transit stops, resulting in a series of more compact communities which decreases the need for automobiles.
Livability	Livability promotes a set of principles that supports sustainable urban designs. Livable communities have affordable and equitable housing, access to employment and community services, multiple and accessible transportation modes, and social and civic engagement.

TOPIC 6.9 Urban Data

Geographic Categories in the Census Table, p. 422

Data at a large scale:

- An advantage is that it provides a big picture look at the nation, or region within the nation.
- A disadvantage is that scale does not show information about targeted, small groups.

Data at a small scale:

- An advantage is that data can allow for focus on the needs of small group or area.
- A disadvantage is that the data may not be indicative of all smaller areas within a country.

If income data was available this information could be used to assess the economic and social needs of a community. For example, low-income areas may need economic assistance.

Selected Quantitative Data of the U.S. and the Detroit MSA Table, p. 423

The data is shown at the national and local/city scales.

No, this data would not be useful. The data does not show population composition data (other than income level) and is not aggregated to show income to the neighborhood level.

See page 121 for a justice and race lesson plan related to Topic 6.9.

Reflect on the Essential Question: How are qualitative and quantitative data used to show the causes and effects of geographic change within urban areas? p. 424

Uses of Urban Quantitative Data	Uses of Urban Qualitative Data
<ul style="list-style-type: none"> Quantitative data is information that can be counted, measured, or sequenced by numeric value. This allows for comparison based on that particular category of data. It shows where people live and gives a description of people's income, age, gender, ethnicity, race, family size, and other details. That information is valuable to governments to determine what services are needed. Quantitative data helps identify the need for and location of other public services such as local emergency medical help providers (EMS), police, fire, and public utilities (trash and sewer services). 	<ul style="list-style-type: none"> Qualitative data is based primarily on surveys, field studies, photos, video, and interviews from people who provide personal perceptions and meaningful descriptions. Questions and study topics help those who gather information learn how individuals and communities feel about topics that affect people who live in the city. Qualitative data is important to geographers and is often used to verify quantitative data.

TOPIC 6.10 Challenges of Urban Changes

Gentrification in San Francisco Graph, p. 429

Rising property values are good for residents or investors who own homes in a neighborhood. The value of the home usually increases the property's equity/value and the amount of rent they can charge to renters. Increased property values can be a negative for people who have less wealth since they often cannot afford the property or taxes in these neighborhoods. Rising property values are also challenging for people who rent their homes, because the cost of rent usually rises as property value increases.

Reflect on the Essential Question: What are the causes and effects of geographic change within urban areas? p. 432

Causes of Geographic Change in Urban Areas	Effects of Geographic Change in Urban Areas
Redlining	This practice often resulted in minorities and the poor being unable to purchase property in neighborhoods where loans were commonly denied.
Blockbusting	When members of a particular ethnic group (often African American or Hispanic families) were moving into the neighborhood, other groups (often middle-class White families) moved elsewhere. Investors would buy houses at low prices and either resell or rent them to minorities for a large profit.
Inclusionary zoning	Government incentives allow for more low-income renters or home buyers. These public housing developments—sometimes called “projects” provided decent housing and a solid sense of community. However, these buildings were often high-rise apartments, which concentrated poverty in a small area within the city.

Urban renewal	The policy allowed governments to clear out the blighted inner-city slums, which usually displaced the residents to low-income government housing complexes and built new development projects. (Continued)
Gentrification	Gentrified neighborhoods experience changes in racial and cultural diversity. Gentrification can displace residents, create space that excludes minorities or the poor, and eliminate the historical cultural landscape of previous residents.
Zones of abandonment	Abandonment is the result of economics and impacts different aspects of an urban region. The area will often have empty decaying buildings, poor sanitation, high crime rates, and vandalism.
Gated communities	The growth of gated communities can reinforce separation in economics, social status, ethnicity, and even political views.

TOPIC 6.11 Challenges of Urban Sustainability

Paris as a Heat Island Graph, p. 433

There is a concentration of people in the urban center, so resources will be stretched to cool the many buildings. This increased use of resources can possibly cause more pollution.

Abandoned Factory Building in Detroit, Michigan Photo, p. 435

Brownfields are expensive to remove or repair and often remain in cities, devaluing neighboring properties. Brownfields often contain dangerous chemicals and pollutants. Also, land is often less expensive in suburbs so building there is more cost effective than redeveloping brownfields.

Reflect on the Essential Question: How effective are attempts to address urban sustainability challenges? p. 436

Urban Challenges	Impacts
Environmental problems	<ul style="list-style-type: none"> ▪ Urban canyons ▪ Urban flooding and water demands ▪ Urban heat islands ▪ Interruption of ecosystems and urban wildlife ▪ Air and water pollution
Sprawl	As a city spreads out it has a greater impact on the environment. More land and energy per capita are needed to maintain a sprawling city as compared to a more compact city design. The physical size of a city has a direct correlation with an ecological footprint , or the impact of human activity on the environment.
Brownfields	These are areas of dilapidated buildings and polluted or contaminated soils. These are expensive to remove or repair and often remain in cities, devaluing neighboring properties. Brownfields exist in most core countries and in some semiperiphery countries.

Geographic Perspectives: Is Urban or Rural Living More Sustainable? p. 437

1. Water quality is usually better in urban and suburban areas of core countries because of better water treatment and purification systems than well water typically used in rural areas. Rural areas do have a higher per capita ecological footprint than urban areas.
2. Urban areas cannot produce their own food, so they require food grown in rural locations.
3. Compact cities in core countries are the most sustainable per capita and sprawling cities are the least sustainable. However, the requirements by cities for food production accounts for a considerable amount of the resource demands of rural areas.

Think as a Geographer: Comparing Cities, p. 438

1. Decisions about advantages and disadvantages often reflect personal preferences. Many people feel that advantages of living in large metropolitan areas include extensive cultural opportunities, job opportunities, and easy contact with people of other cultures. Many people feel that disadvantages of living in large metropolitan areas are the high population density, high levels of pollution, and the distance from rural areas and open lands.
2. The MSA consists of the city, the county in which it is located, and adjacent counties that have a high degree of social and economic integration, or connection, with the urban core.
3. Median age is at a local (city) scale.
4. Student preferences will vary. Of the three cities listed, Philadelphia is the largest in population and has the highest murder rate and the highest median age. Minneapolis is the wealthiest and has the lowest median age. Orlando is the smallest and has the lowest median household income and the lowest murder rate.

Chapter 17 Review Questions, pp. 439–442

Page	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	D	IMP-6.D	3.D	419–421
2	E	SPS-6.A	2.C	431
3	B	SPS-6.B	2.C	427–428
4	D	SPS-6.B	1.D	431–432
5	A	SPS-6.B	2.C	425–429
6	C	SPS-6.A	1.D	426–427
7	E	SPS-6.A	3.C	428

Chapter 17: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

The Brookings Institute, a research organization based in Washington, D.C., issued a report that stated, "Urban areas face daunting economic challenges that have increased in scope in recent years. At the same time, cities provide exciting opportunities for growth and revitalization. The interplay of these challenges and opportunities creates important tasks for policymakers and researchers."	
A. Describe ONE economic problem of urban areas today to which this quote could refer.	<p>Description should include one answer and details that support it.</p> <ul style="list-style-type: none">▪ Poverty is an enormous challenge that could see some change if policymakers can create more opportunities for housing. Constructing adequate housing, funding schools, and providing credit are the most obvious issues.▪ Urban decay is the deterioration of the dwellings in a city. This is seen with brownfields of abandoned industrial buildings and filtering of housing to groups of lower income people. Also, urban decay is caused by banks giving fewer loans in certain urban areas, called redlining.▪ Redevelopment of urban areas by the government can break up neighborhoods, force residents to leave, or eliminate historic areas.
B. Explain the potential economic benefits when an older, rundown part of a city is redeveloped.	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none">▪ Redevelopment can provide new roads and schools for a community.▪ Businesses can develop as the government can sell to them land in redeveloped areas with tax breaks as incentives.▪ Brownfields or abandoned buildings can be torn down and replaced with useful structures.
C. Explain ONE social problem that can occur when an older, rundown part of a city is redeveloped.	<p>Explanation must include a claim and specific details or examples that support the claim. Redevelopment of urban areas by the government can cause a number of social problems.</p> <ul style="list-style-type: none">▪ Breaking up neighborhoods▪ Forcing residents to leave▪ Eliminating historic areas▪ Gentrification (wealthier residents moving into neighborhoods and forcing values and costs to go too high for existing residents)
D. Describe the challenges for people who live in an urban food desert.	<p>Description must include a claim and specific details or examples that support the claim. An urban food desert is an urban area that lacks food stores, often with the only options being unhealthy fast food. This leads to problems:</p> <ul style="list-style-type: none">▪ Poorer diets for residents▪ Increased health problems for residents▪ Greater need to find transportation to distant food stores

E. Explain ONE potential solution to address the challenges of living in an urban food desert that does not involve relocating residents.	<p>Explanation should include the details or examples listed.</p> <ul style="list-style-type: none"> ▪ Government can provide incentives, such as tax breaks, to food stores to build in urban areas of need. ▪ Mobile food stores can be used to allow access to more healthful food in urban locations. ▪ Existing stores, such as convenience stores, can offer more healthful food options. ▪ Residents can promote community garden options in urban settings.
F. Metropolitan areas such as Los Angeles and Chicago are often made up of multiple smaller cities, each with its own local government. Explain the problems this can create related to solving transportation issues within a metro area.	<p>Description must include an answer and specific details or examples that support it.</p> <ul style="list-style-type: none"> ▪ The cost of maintaining and repairing infrastructure is difficult to determine among local governments. ▪ Environmental issues such as pollution become more difficult to deal with when multiple governments are involved. ▪ The coordination of land for public projects of building roads and highways is challenging. ▪ Because of challenges, special regional transportation districts are often created to solve the problems but this adds another layer of government. <i>(Continued)</i>
G. Describe how cities can negatively impact the environment.	<p>Description must include an answer and specific details or examples that support it.</p> <ul style="list-style-type: none"> ▪ Cities have lots of hardscapes (pavement) and runoff of rainwater from these surfaces can cause flooding and prevent the recharging of natural water sources. ▪ Urban heat islands raise temperatures in urban areas resulting in more energy use. ▪ Urban canyons can channel winds in cities and prevent sunlight from reaching the ground. ▪ Animal habitats can be destroyed as cities sprawl. ▪ Urban wildlife is often considered a nuisance and then killed or relocated. ▪ Air, water, noise and light pollution plus waste disposal present especially challenging problems for large cities.

UNIT 6—Review

Applying Geographic Skills, p. 443

1C Similarities of metacities and world cities:

- Both have large populations.
- Each exert a significant amount of influence.

Differences between metacities and world cities:

- Metacities have at least a population of at least 20 million; there is no population requirement for world cities.
- World cities exert more regional or global influence economically and socially than metacities.

2D Answers will vary. Some possibilities are below:

Similarities: Cities in core and periphery countries have a CBD and industrial zones. Each has various zones for residential areas that distinguish between higher-density and lower-density housing. Cities in both types of countries have disamenity zones or areas that lack many elements of infrastructure.

Differences: The location of zones tends to differ between core and periphery countries.

3F The data is not aggregated down to the neighborhood level so it would not be valuable in determining where a park would best be located.

4E Both locations have high-rise buildings in a CBD with surrounding residential areas. A difference is the residential land surrounding the CBD in Brazil is on a steep hillside and the land surrounding the Chicago CBD is a flat plain.

5B Borchert's model has the rail epoch from 1870–1920 which was the period when many cities began to grow. On the local scale industry located along rail lines and spurs to gain access to the transportation system. Local streetcar rail lines created a pinwheel design of the city with communities following the rail to outlying neighborhoods called streetcar suburbs. For example, the sector model has specific sectors for transportation that run along industrial sectors and housing sectors. Rail lines allowed cities to expand while still being connected to the CBDs services and jobs.

On a more regional or national scale cities popped up along rail lines as they connected larger cities and communities. Cities or towns without rail stops struggled to survive. Cities and towns begin to show a linear distribution along railroad networks and lines.

Write as a Geographer: Give Full Explanations, p. 444

Answers will vary.

1. Set A:

Governments at different scales can promote sustainability.

2. Set B:

Urban sustainability is a challenge and is being addressed in various ways.

3. Set C:

Signs of growth of the sustainability movement can be found around the world.

UNIT 7:

Industrialization and Economic Development Patterns and Processes

CHAPTER 18 Industrialization and Economic Development

TOPIC 7.1 The Industrial Revolution

Diffusion of the Industrial Revolution Map, p. 448

After industrialization spread to nearby European countries, it was quickly diffused to colonies of those European powers in North and South America.

In addition to distance, the natural resources and level of development of a place influenced how rapidly industrialization occurred. Less-developed regions adopted the process at a slower rate, particularly in the interior, less-connected regions of periphery countries.

The Industrial Belt and Industrial Regions Map, p. 451

The industrial belt is located in the midlatitudes of the Northern Hemisphere within or near large urban complexes. Most industrial regions are located along coast/near seaports, along major rivers, or in close proximity to important raw materials.

Location along bodies of water allows for easy and inexpensive transportation of goods and raw materials. The location within an urban complex allows for easy access to a large labor supply, large local market, good transportation networks, and necessary infrastructure such as electricity. Proximity to raw materials is important if a large quantity of the raw material is used to produce the final product.

See page 122 for a justice and race lesson plan related to Topic 7.1.

Reflect on the Essential Question: How did the Industrial Revolution facilitate the growth and diffusion of industrialization? p. 451

Reasons for Growth	Reasons for Diffusion
<ul style="list-style-type: none">Starting in the 18th century, a series of technological advances known as the Industrial Revolution resulted in more complex machinery driven by water or steam power that could make products faster and at lower costs than could cottage industries. Because the new machinery was so large and required so much investment money, or capital, manufacturing shifted from homes to factories.As new forms of transportation and electricity were developed during the 19th century, industries became less dependent on the location of local coal supplies and companies could build factories in more diverse locations.For most of the 20th century, industrialized regions were often found in large urban areas that provided a significant workforce and along coasts or rivers which provided easy transportation to global markets.	<ul style="list-style-type: none">Improved transportation and communication networks increased the speed of diffusion.As countries such as Great Britain and France industrialized, they desired to control trading posts and colonies around the world. They also looked to colonies to provide various resources and economic benefits:<ul style="list-style-type: none">raw materials such as sugar, cotton, foodstuffs, lumber, and minerals for use in mills and factorieslabor to extract raw materialsmarkets where manufacturers could sell finished productsports where trading ships could stop to get resuppliedcapital from profits for investing in new factories, canals, and railroads

TOPIC 7.2 Economic Sectors and Patterns

Additional Sectors of the U.S. Economy Table, pp. 452–453

- A) Quaternary
- B) Tertiary
- C) Primary
- D) Secondary
- E) Quinary

Structural Changes in Economies Graph, p. 453

The primary worker percentages decrease as development occurs. The percentage of workers in the secondary sector initially increases but starts to decrease as more capital-intensive manufacturing increases. The percentages of workers in the tertiary, quaternary, and quinary sectors increase to eventually represent a higher percentage of workers compared to the secondary and primary sectors.

Labor Force by Sector Graph, p. 454

It will more likely shift toward resembling the U.S. graph. As China continues to develop, there will be more farm mechanization, freeing up more rural residents to move to cities and become involved in the expanding secondary sector. Thus, the primary sector will shrink, and the secondary sector will expand. If China eventually starts to deindustrialize, the secondary sector may eventually shrink as has happened in the United States and other highly industrialized countries. As more industrialization occurs and a larger middle class develops, there will also likely be an expansion of the tertiary sector.

Weber's Locational Triangle Graphic, p. 456

C, Resource 2

Reflect on the Essential Question: What are the spatial patterns of industrial production and development? p. 461

Identify the Three Elements of Weber's Model	Description of Each Element of Weber's Model
Minimizing transportation costs	Getting raw materials to the factory and moving finished products to where they will be sold with as little cost as possible
Minimizing labor costs	Keeping salaries and wages at a point where profits will be greatest for the business
Maximizing agglomeration economies	Using the spatial grouping of several businesses to share costs, such as an access road to a public highway or development of a workforce with special skills, to reduce costs

TOPIC 7.3 Measures of Development

GDP (PPP) Per Capita Map, p. 463

Many of the poorest countries are landlocked or geographically disadvantaged. They are located in peripheral regions of the world (sub-Saharan Africa, Central Asia).

Because they do not have any ocean coastline, they have more difficulties trading with other countries and becoming an integral part of the global economy. They must depend upon good relations with their neighboring countries that do have ocean access, if they wish to trade globally. Often these poor countries have very limited transportation networks within their countries which also makes internal trade difficult. They often lack the infrastructure and financial resources to quickly improve their economies.

Comparing Terms for Levels of Development Table, p. 464

Answers will vary. The World Bank uses four classifications, rather than three. This will allow for more accurate descriptions of countries' income classifications.

Energy Consumption Around the World Map, p. 466

More-developed areas, such as North America, Europe, and Australia use the most energy. Less-developed areas, such as Africa, South America, and parts of Asia, use the least energy.

Gini Coefficient by Country Map, p. 466

Countries which have experienced industrialization tend to have a larger middle class. A large middle class usually accompanies a lower Gini.

GII World Rankings, 2019 Table, p. 468

Switzerland has much lower GII so it would be expected that it also has a lower maternal mortality rate and adolescent fertility rate.

Differences Among GII Data, 2018 Table, p. 469

Switzerland and the United States have the greatest opportunities—more than 96 percent of females gain at least some secondary education. This results in a parliament with 29 percent females in Switzerland and almost 24 percent in the United States.

Human Development Index Map, p. 469

Africa

Human Development Index Score, 2019 Table, p. 470

Cuba is not a wealthy country, but the government recognizes the importance of health and education and invests in those areas. This is reflected in a higher HDI score.

Qatar is a very wealthy country, largely due to the revenue from oil, but their education system is not as strong as expected. This suggests the government has not prioritized education as much as the Cuban government has.

Reflect on the Essential Question: What are social and economic measures of development? p. 470

Social Measures	Economic Measures
<ul style="list-style-type: none">▪ Gender gap measures the differences in the privileges afforded to males and females in a society.▪ Gender Inequality Index (GII), is a composite measure of several factors, such as reproductive health, empowerment, and labor market participation.▪ Human Development Index (HDI) combines one economic measure (GNI per capita) with three social measures (life expectancy, expected years of schooling, and average years of schooling).	<ul style="list-style-type: none">▪ The Gross National Product (GNP) and the Gross National Income (GNI) measure the money generated by citizens and businesses of a country, regardless of where the citizens are, or live, when money is earned.▪ The dollar amount of all final goods and services produced within a country in one year is the Gross Domestic Product (GDP).▪ Purchasing power parity (PPP) measures the cost of similar goods in different countries.▪ Economic level is the GDP per capita.▪ Human Development Index uses both economic and social factors.▪ World Systems Theory is based on a country's role in the world economy.▪ Stages of Economic Growth model is determined by the economic activity of a country.▪ Income classification uses GNI per capita.▪ Gini coefficient measures income inequality of a country's population.▪ A country's energy consumption is used as an economic measure.

TOPIC 7.4 Women and Economic Development

Reflect on the Essential Question: What factors have contributed to gender parity? p. 473

Social	Economic
<ul style="list-style-type: none">▪ A reason for increased female participation in the labor force is because of very low birth rates.▪ Increased educational opportunities for females during the past two decades also prepared more women to work outside their homes.	<ul style="list-style-type: none">▪ One reason for the expanded employment opportunities for women has been the efforts of transnational corporations. As these businesses have opened more factories in developing countries, they often employed women because they were available and would work for lower wages than men.▪ NGOs have helped women through microcredit, or microfinance programs, to provide loans often to start or expand a business.▪ The increased financial clout of women gave them more influence in their homes and communities.

Geographic Perspectives: Neighborhoods for New Classes, p. 473

1. The working class
2. This class needed to be near the factories where they worked. The less-desirable housing, usually located just outside the CBDs, was often what the working class could afford based on the wages they earned.

Think as a Geographer: Comparing Cities, p. 474

1. The United States and Japan both have high life expectancies, high expected levels of education, and high incomes per capita.
2. Haiti, Bangladesh, and Nigeria are considered part of the periphery because of their low numbers in each category.
3. Increasing the income of people in the country could lead to better health care and public health measures, which would lead to longer life expectancies.
4. More schooling often results in higher per capita income. There are inconsistencies, such as between Japan and Brazil or India and Nigeria.

Chapter 18 Review Questions, pp. 475–477

Page	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	C	SPS-7.C, SPS-7.D	3.D	468–469
2	E	SPS-7.C	1.B	469–471
3	B	SPS-7.A	1.B	466–468
4	C	SPS-7.B	1.A	460
5	A	SPS-7.B	1.B	452–453
6	B	SPS-7.C	1.D	463
7	D	SPS-7.B	2.C	456

Chapter 18: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

One way to analyze a region's economic system is by the types of jobs people perform. Use the diagram below to answer the questions that follow it.	
A. Identify the category of jobs and give a specific example of a job that is most common in pre- industrial countries or regions.	<p>Answer must correctly identify category and one example to receive the point. An example would be:</p> <ul style="list-style-type: none">▪ Category: Primary or primary sector▪ Examples: Farming, mining, fishing, forestry, hunting and gathering, subsistence farming, and pastoral nomadism
B. Describe the type of jobs that are associated with the secondary sector of the economy.	<p>Description should include several details or examples.</p> <p>The secondary sector includes manufacturing, working in a factory, building, taking resources or raw materials and transforming them into a new product.</p>
C. Explain why the percentage of workforce in the secondary sector often declines as a country becomes more developed.	<p>Explanation must include a claim and specific details or examples that support the claim. Any one of the following will be considered correct.</p> <ul style="list-style-type: none">▪ Offshoring: Companies will often relocate manufacturing to other countries that have cheaper labor. (Note: Outsourcing works only if student indicates relocating to another country.)▪ Robots or other capital-intensive improvements: Companies will often replace workers with machines, robots, or other advanced automation technologies because they are often more cost-efficient in labor-intensive production, resulting in fewer secondary jobs.▪ Economic changes to the tertiary service sector economy: Increasingly advanced economies rely heavily on high tech or other high-skilled service sector jobs to fuel the economy, resulting in fewer secondary jobs.
D. Describe an additional economic impact on a local community when jobs are lost in the secondary sector.	<p>Description must include a claim and specific details or examples that support the claim. Any one of the following will be considered correct.</p> <ul style="list-style-type: none">▪ Reverse multiplier effect: Jobs lost in the secondary sector often cause other jobs to be lost in other parts of the economy. For example, if workers in a factory bought lunch at a local restaurant, the restaurant's business will decline if the factory workers lose jobs.▪ Loss of income and tax revenue: Money within the local economy declines, which can result in less revenue available for schools, parks, infrastructure or other community services.▪ Deindustrialization: If one factory closes, often other factories will close. This can result in a transformation of the economy from an industrial-based to service-sector economy. <p>Note: "Increased unemployment rate" by itself is not enough without a discussion from one of the above choices.</p>

E. The number of people employed in the secondary sector in the United States has declined since 1975, but the overall production of goods has increased. Explain how this statement could be true.	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <p>Companies will often replace workers with machines, robots, or other advanced automation technologies because they are often more cost-efficient than labor-intensive production. This results in fewer workers in secondary jobs, but overall productivity of factories increases. Machines can also run 24 hours a day, if needed.</p>
F. Describe tertiary sector jobs.	<p>Description should include several details or examples.</p> <ul style="list-style-type: none"> ▪ Tertiary sector provides services rather than working with natural resources. ▪ Examples could include marketing, banking, design, office jobs, or servers.
G. Explain the benefit of quaternary sector jobs.	<p>Explanation must include one specific detail or example.</p> <ul style="list-style-type: none"> ▪ Higher incomes: Quaternary jobs are usually high skilled and pay a higher salary. Increased incomes can help support other jobs within the community such as restaurants, schools, or construction. In addition, higher tax revenues often occur, which can result in more money for infrastructure, government services, and other community-based projects. ▪ Multiplier effect: Quaternary jobs in high tech, university research, or medical technologies often result in more jobs created within a local economy.

CHAPTER 19 Development and Trade

TOPIC 7.5 Theories of Development

Rostow's Stages of Economic Growth Table, p. 480

Even if all countries reach the high mass consumption stage, income inequality would still exist and not all individuals would experience the higher standard of living. Also, if all countries reached the high mass consumption stage, a concern would be sustainability. This would challenge the carrying capacity of the earth.

The World System Map, p. 483

Australia and New Zealand were British colonies. These ties to Britain led to both places exhibiting many characteristics of core countries, such as highly educated and skilled population, industrialized economy, strong connectivity to the global economy, high percentage of urban population, natural resources, strong infrastructure, and stable government. This resulted in core status over time.

Reflect on the Essential Question: What are the theories of economic and social development? p. 484

Development Theory	Explanation of Theory
Rostow's Stages of Economic Growth model	<p>This is an economic development model that explains the linear progression in which countries move from one stage to the next. Rostow's model has five stages:</p> <ul style="list-style-type: none"> ▪ Traditional society ▪ Preconditions for take-off ▪ Take-off ▪ Drive to maturity ▪ High mass consumption
Wallerstein's World Systems theory	<p>This is a dependency model, meaning that countries do not exist in isolation but are part of an intertwined world system in which all countries are dependent on each other. Wallerstein divided countries into three categories:</p> <ul style="list-style-type: none"> ▪ core ▪ semiperiphery ▪ periphery

TOPIC 7.6 Trade and the World Economy

See page 123 for a justice and race lesson plan related to Topic 7.6.

Reflect on the Essential Question: What are the causes and geographic consequences of recent economic changes such as the increase in international trade, deindustrialization, and growing interdependence in the world economy? p. 490

Causes of Economic Changes	Consequences of Economic Changes
Interdependence	Increased interdependency has strengthened the links among the countries' economies. Growth in one country can result in new economic opportunities in other countries.
Technology	<ul style="list-style-type: none"> ▪ Larger and faster ships, containerization, improvements to major canals and new port facilities, and increases in air cargo have made moving goods less expensive. ▪ The Internet increased the efficiency of trade and transportation information systems. ▪ Online sales have expanded markets for both consumers and producers resulting in increased demand and trade.
Government policies	<ul style="list-style-type: none"> ▪ Since the end of World War II in 1945, most core countries have promoted free trade policies because of benefits to corporations and consumers. ▪ Trade barriers such as tariffs limit trade among nations.
Growth of supranational trading blocs	The increasing importance of trade has resulted in many countries having strengthened relationships with their most important trading partners through supranational trade blocs.

Geographic Perspectives: Neighborhoods for New Classes, pp. 490–491

1. Thailand's economic crisis affected its closest neighbors the most because of distance decay. Countries more distant from Thailand did experience some effects because of diffusion.
2. The local community and county of the manufacturing plant would be hardest hit by the shutdown. Because of the reverse multiplier effect, other jobs in the area could be lost (suppliers, restaurants, schools, etc.). Lesser effects would impact other parts of Mississippi and neighboring states.

Think as a Geographer: Analyze Tariff Information, p. 491

1. The general level of tariffs rose between 1792 and 1860.
2. Tariffs were significantly higher between 1860 and 1910 than they were earlier or later.
3. Since 1942, tariffs have generally decreased.
4. Developing countries might argue that they should use high tariffs to protect emerging industries, just as the United States did when it was developing. Or, developing countries might argue that they should reduce tariffs to promote consumption, just as the United States has done since 1940.

Chapter 19 Review Questions, pp. 492–494

Page	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	C	SPS-7.E	1.D	484
2	C	SPS-7.E	2.B	481–482
3	C	SPS-7.E	3.B	481–482
4	C	SPS-7.E	2.B	479–480
5	D	SPS-7.E	2.B	479–480
6	C	PSO-7.A	1.D	257, 371
7	C	PSO-7.A	3.A	488

Chapter 19: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

Two models of economic development are Rostow's Stages of Economic Growth and Wallerstein's World Systems. Rostow's model argues that all countries can attain higher levels of development by progressing through a five-step process. Wallerstein argues that the world will remain divided in a relationship focused on periphery, semiperiphery and core regions.	
A. Identify TWO countries or regions of the world on which Rostow's model was based.	Answer must correctly identify two of the countries listed to receive the point: <ul style="list-style-type: none">▪ North American nations, European nations, Australia, and Japan.

B. Using the Rostow model rationale, explain why improving a country's infrastructure is a precondition for economic development.	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <p>Rostow's model is linear and infrastructure improvements are in Stage 2. The following stages require technological innovations that are dependent on a solid infrastructure, so if infrastructure is failing, economic growth will not take place. Examples of infrastructure improvement could include roads, electrical grids, and water systems.</p>
C. Describe the types of economic products that the periphery supplies to the core and semiperiphery.	<p>Description should include each of the details or examples listed. The semiperiphery includes the least-developed countries. They provide:</p> <ul style="list-style-type: none"> ▪ Raw materials: usually inexpensive natural resources to fuel production in the other categories ▪ Agricultural products: often labor-intensive crops ▪ Labor: usually low-skill jobs in labor-intensive industries such as extracting raw material, farming, and some types of manufacturing
D. Explain the economic role that semiperiphery countries often provide for core countries.	<p>Explanation should include the details or examples listed.</p> <p>Semiperiphery countries share characteristics of both the core and periphery. The semiperiphery provides manufactured goods to core countries. Usually those are goods that the core once produced but no longer does.</p>
E. Explain why world system theorists often argue that multinational corporations act as a new or neocolonial economic force.	<p>Explanation must include a claim and specific details or examples that support the claim. Arguments are based on several factors regarding multinational corporations:</p> <ul style="list-style-type: none"> ▪ Weak environmental laws in less-developed countries are exploited ▪ Weak laws protecting workers' rights in less-developed countries are exploited ▪ Wages paid to labor in periphery and semiperiphery countries are low ▪ Periphery countries receive fewer profits from manufacturing
F. Describe ONE change that has increased gender equality in the past 20 years.	<p>Description must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ In countries where women gain employment, the economy improves and the standard of living improves. ▪ More educational opportunities for women have also opened up more doors to women who seek employment. In the 21st century, more than 250 million women have joined the workforce globally. ▪ Nongovernmental organizations (NGOs) began using microcredit or microfinance programs that were designed to give loans to start or expand small businesses. Oftentimes, the entrepreneurs were women from South Asia and South America who came from impoverished situations. Increased financial responsibility in the areas giving microcredit loans improved the status and influence of women.

G. Describe ONE challenge that societies still face in achieving gender equality.	<p>Description must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ According to the Gender Inequality Index (GII), some parts of the globe, such as West Africa and Southwest Asia, have higher levels of inequality. ▪ Pay is still unequal in many places for women. In the United States, a man who has a similar job to a woman typically makes 17.5 percent more. ▪ A glass ceiling (limits to women gaining upper-level jobs) still exists, especially in developed countries.
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CHAPTER 20 Changing Global Economy and Sustainability

TOPIC 7.7 Changes as a Result of the World Economy

Manufacturing Costs, 2012 Graph, p. 497

Approximately \$60 more in Norway or more than 30 times more expensive

Tax breaks and other economic incentives are offered by maquiladoras in Mexico.

Additionally, proximity to the United States results in less transportation costs for resources and finished products. The political relationship the United States has with Mexico is more stable and compatible than with China.

Structure of the U.S. Labor Force, 1940 and 2020 Graph, p. 498

The United States has moved into a postindustrial economy and an increasing percentage of the workforce has moved from the primary sector into the tertiary, quaternary, and quinary sectors.

Female Workers in EPZs, 2007 Graph, p. 500

Wages are usually low for employees in EPZs and women in developing countries are more likely to accept lower wages for their work.

Reflect on the Essential Question: What are the causes and geographic consequences of recent economic changes such as the increase in international trade, deindustrialization, and growing interdependence in the world economy? p. 504

Causes of Global Economic Changes	Consequences of Global Economic Changes
Outsourcing and offshoring	Many companies from core countries are moving tertiary and quaternary sector jobs to semiperiphery countries to take advantage of skilled labor at lower wages.
Economic restructuring	<ul style="list-style-type: none"> ▪ Many companies have adopted new technology that needs fewer employees to operate. ▪ The new international division of labor is a system that has changed employment in the various economic sectors throughout the world.

Export-processing zones (EPZs)	<ul style="list-style-type: none"> ▪ In China, the original SEZs were situated in coastal cities near major ports, allowing easy access to international markets. ▪ The American-owned maquiladoras were originally all positioned in a single district in northern Mexico, near the United States-Mexico border to minimize transportation costs into the United States. ▪ FTZs are locations around the world where a foreign company can store, warehouse, transfer, or process without additional taxation or duties if goods are exported.
Postindustrial economies	<ul style="list-style-type: none"> ▪ Industrial adaptability, such as the substitution principle, became the basis of the post-Fordist system. ▪ Increased mechanization saves a company money over the long term and creates <i>economies of scale</i> by allowing business owners to increase output with improved efficiency. ▪ The location of many businesses changed to be in proximity to similar businesses to take advantage of agglomeration economies. ▪ The number of tech businesses increased and they located near each other to create technopoles, hubs for information-based industry and high-tech manufacturing.

TOPIC 7.8: Sustainable Development

Ecological Footprint Per Person, 2017 Table, p. 506

The different levels of development, income per capita, and economic sector are partially responsible for the variation among countries in the table. Because Qatar produces oil, it is inexpensive within the country. Petroleum is the major energy source and its population has the wealth to afford many essential and non-essential goods and services.

See page 124 for a justice and race lesson plan related to Topic 7.8.

Reflect on the Essential Question: How are sustainability principles related to and impact industrialization and spatial development? p. 510

Sustainability Principles	Impact of Sustainability Principles
Sustainable development	<ul style="list-style-type: none"> ▪ Reduce countries' ecological footprint, or impact on the environment ▪ Slow resource depletion ▪ Control and limit pollution ▪ Reduce greenhouse gas emissions and slow/reverse climate change
Ecotourism	Revenue from visitors can be used to preserve and protect endangered ecosystems. Also, jobs can be created for local populations by ecotourism.
UN Sustainability Goals	The UN created 17 goals to promote human development initiatives with a focus on environmentally sustainable practices.

Geographic Perspectives: Neighborhoods for New Classes, p. 511

1. Argentina moved back to being a semiperiphery country because it suffered periods of massive inflation, military dictatorships, and heavy foreign debt.

2. Korea improved its economic development by focusing on education, providing government subsidies, implementing trade restrictions, and promoting strong corporations. These changes combined with a focus on producing exports, allowed for significant gains by Korea.
3. Answers will vary.

Think as a Geographer: Industrial Growth at Different Scales, p. 512

Aircraft Factory Closes		
Effect	Economic, Social, Political, or Environmental	Additional Effect
Local: The amount of empty space in the community's industrial area increases.	Environmental	School funding declines (economic and social).
National: The federal government funds a program to retrain unemployed workers.	Economic and Political	The country loses its ability to produce planes (political and economic).
Global: The supply of aircraft decreases, which causes airplane prices to increase.	Economic	Large-scale closures could cause a global economic slowdown (economic).

Aircraft Factory Opens		
Effect	Economic, Social, Political, or Environmental	Additional Effect
Local: The unemployment rate decreases, and total income in the community increases.	Social and Economic	The multiplier effect creates additional jobs in retail and housing (economic).
National: Total federal tax revenue increases.	Economic and Political	The country becomes a center for aviation technology (social and economic).
Global: The supply of aircraft increases, which causes airplane prices to decrease.	Economic	More people fly in planes which increases pollution (environmental).

Chapter 20 Review Questions, pp. 513–516

Page	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	B	PSO-7.A	3.E	496–498
2	B	PSO-7.A	1.B	459
3	D	PSO-7.A	3.B	503
4	B	PSO-7.A	1.B	503–504
5	A	PSO-7.A	1.D	499–500
6	A	IMP-7.A	3.C	506–507
7	B	PSO-7.A	1.D	454–455

Chapter 20: Free-Response Scoring Guidelines

All parts of the questions are worth one point each. This essay is worth 7 points total.

<p>Neoliberal policies and greater complementarity have caused dramatic changes in global trade since the 1950s. National governments set the rules, but companies are the most common trading partners, not countries. The values in the table below are percentages of travel and communication costs using the 1930 costs as 100 percent.</p>	
<p>A. Using the concept of complementarity, explain why companies in different countries trade with each other.</p>	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <p>Trade occurs when one party desires a good or service it does not have or cannot produce as efficiently as someone else can, and another party has the desired good or service and is willing to part with it. Complementarity exists when both parties have goods or services that the other party desires, which increases the likelihood of trade.</p>
<p>B. Use the table to explain the pattern of global exports in the graph.</p>	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ Pattern: Global trade increased dramatically starting in 1950 and has continued. ▪ Reasons: The cost of international transportation and communication have declined steadily, making it easier for items to be produced in one location and sold in another. Also, because producers have reduced costs, the friction of distance has decreased or the relative distance between locations has become smaller.
<p>C. Using a specific method of transportation, describe the benefit of using this mode of transportation for trade.</p>	<p>Description must include a claim and specific details or examples that support the claim. Any one of the following will be considered correct.</p> <ul style="list-style-type: none"> ▪ Plane: speed, keep food fresh, good security measures, lower theft ▪ Train: large loads, faster than boat or truck for point-to-point destinations, refrigerated cars exist, containers can be transferred to other vehicles ▪ Truck/road: most flexible and can go almost anywhere, easy to adjust routes, relatively fast compared to water, containers can be transferred to other vehicles ▪ Water/boat: large cargoes, containers are now easier to move, excellent economies of scale (low marginal cost) ▪ Internet: some products, like software, can be delivered with the benefits of speed and relative low cost
<p>D. Describe how export processing zones (EPZ) or special economic zones (SEZ) work to lower the cost of trade.</p>	<p>Description must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ Export Processing Zones (Special Economic Zones) lower the cost of trade by allowing foreign-controlled businesses to operate with special regulations. These include tax breaks for machinery and raw materials. Wages for workers will be lower, yet usually reasonable for the region, allowing the business to keep the cost of their goods low and affordable.

E. Describe ONE positive economic impact of increased international trade on a local community.	<p>Description must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ There are less expensive and more accessible goods. ▪ Number of jobs increase, especially in Export Processing Zones. Wages tend to be lower but are still acceptable by standards of the local community. ▪ Women often fill those jobs, which improves their status. ▪ Regulations are set up so there isn't competition with local businesses.
F. Describe ONE negative economic impact of increased international trade on a local community.	<p>Description must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ Wages decrease or are low to compete on global scale. ▪ Lax regulations can create dangerous working environments. ▪ Less tax revenue from business can slow development. ▪ Jobs may be lost in local community to trade. Local companies may close factories or choose to outsource or offshore to regions that can produce goods at a lower cost.
G. Explain how women in developing countries often benefit from international trade.	<p>Explanation must include a claim and specific details or examples that support the claim.</p> <ul style="list-style-type: none"> ▪ Women often fill those jobs and improve their status. ▪ Earning wages make women less dependent on men. ▪ Birth rates often decline as women gain employment.

UNIT 7—Review

Applying Geographic Skills, p. 517

1C Advantages of locating in Ohio:

- Transportation infrastructure in Ohio (and all of the United States) is well maintained.
- An ample supply of skilled workers

Advantages of locating in Mexico:

- Labor costs would be lower than in the United States.
- Mexico would likely offer tax breaks to a U.S. company that locates there.

2C Deindustrialization in the Northeast and Great Lakes area resulted in the closing of many manufacturing companies. When those industries closed, workers lost jobs and moved elsewhere for employment. Without the economic activity of those workers, the cumulative effect was that many other businesses (suppliers, retail, services) failed.

3D Eastern Europe and Russia have relatively low income inequality according to the Gini coefficient (.30 or less) and that area also has a high or very high Human Development Index score (.800 or higher).

Most of South America has a Gini coefficient of more than .5 which indicates significant income inequality, yet its Human Development Index category ranks it as high or very high (more than .700)

4E Containerization has standardized shipping units so they can be moved faster and at less cost. This allows more countries to participate in global trade. Containerization has helped more semiperiphery countries move into the secondary and tertiary sector.

This has promoted a new international division of labor by allowing a product to be designed in one country, use resources from multiple countries, be manufactured in another country, and finally sold in any country.

- 5B** International: Different countries and regions have higher or lower levels of income inequality. South America and southern Africa have great inequity of income. These regions have people with great wealth but also have many people with very low incomes.

National: Regions within a country that have less-developed infrastructure and transportation routes usually have much lower incomes than regions that are in the core or wealthiest parts of a country. This process creates income inequality and development levels within a country.

Local: Some locations, such as inner-city neighborhoods, demonstrate lower incomes than wealthy suburbs or country club neighborhoods. This income inequality often results in fewer services and job opportunities for some communities within a city.

Write as a Geographer: Give Full Explanations, p. 517

1. Purchasing power parity is a useful refinement of gross national income because it more accurately compares the ability of individuals in two different countries to purchase the same goods or services.
 - GNI focuses solely on income. It does not measure the prices of goods and services.
 - Whether a person can afford to purchase a good or service is based both on the cost and the person's income.
 - In a country such as the Czech Republic, where wages are lower than in the United States, people have less money to spend, but the lower wages also reduce the costs for transporting, marketing, and selling goods, so prices are lower.
2. Both Rostow's Model and Wallerstein's Theory simplified the complexity faced by real countries.
 - Both models reflect the view that the United States and Europe are the most desired form of civilization, either because they have reached the highest stage of economic growth because they are part of the core. Many people throughout the world reject the United States and Europe as models because they are too democratic, too materialistic, etc.
 - Both models focus on economic and political issues, and give less attention to the importance of culture. Religion and ethnic ties have proven to be very powerful in recent years.
 - Both are based on a world of nation-states, which is less relevant today than in the recent past. Advances in communication and transportation, the rise of international organizations, and the influence of devolution have made the distinctions among countries less sharp.
3. Sustainable growth might reduce economic growth, but it would stretch out the natural resources people rely on.
 - If sustainable growth limits overall economic growth, people in poverty might be the ones to suffer the most. They might remain impoverished.
 - People have been farming for thousands of years, but the intensification of farming in the past two centuries has threatened to deplete soil of nutrients faster than ever. Sustainable development would protect this soil for future generations.
 - Sustainable growth would reduce air and water pollution, which could improve overall human health.

AP[®] Human Geography Practice Examination

Practice Exam Questions, pp. 518–546

Question Number	Answer	Learning Objective	Skill	Text Pages
Multiple Choice				
1	B	PSO-3.A	4.A	164–167
2	C	PSO-3.D	3.E	164–167
3	E	IMP-1.B	4.A	18–20
4	C	PSO-3.B	4.C	145
5	D	PSO-3.B	1.A	142–145
6	A	SPS-1.A	2.E	43–46
7	E	PSO-5.D	1.E	319–320
8	E	SPS-4.A	2.B	224, 248
9	A	PSO-4.A	1.C	140, 150
10	D	IMP-2.A	2.C	110–113
11	C	IMP-2.A	3.C	64–69
12	D	PSO-2	5.B	64–69
13	E	IMP-2.D	1.D	115–116
14	A	PSO-1.A	2.B	4, 33, 112
15	C	IMP-6.A, SPS-6.A	1.C	404, 428
16	C	PSO-3.D	4.C	135–136
17	B	SPS-3.A	2.C	171–173
18	C	PSO-6.A	2.B	376–377
19	D	SPS-3.A	2.B	164–165
20	C	PSO-4.A	3.E	194–196
21	E	SPS-4.C	2.B	150–151
22	B	PSO-5.C	2.E	61–63
23	C	IMP-4.B	2.C	244–245
24	B	PSO-5.C	1.C	277–278
25	D	IMP-3.A	1.D	154–157
26	D	SPS-4.B	1.D	252–253
27	A	PSO-7.A	2.B	429, 435
28	C	PSO-2.D	5.C	59–60, 62
29	A	SPS-2.A	3.C	96–97
30	B	IMP-5.A	4.A	336

31	A	IMP-5.B	2.B	351–352
32	B	SPS-5.D	1.E	296–299
33	C	PSO-6.D	2.D	398–399
34	C	SPS-6.A	2.C	428
35	E	IMP-5.B	2.E	273–274
36	B	PSO-5.D	4.B	309
37	A	PSO-5.D	4.B	273–274
38	B	SPS-7.B	4.A	453–454
39	D	PSO-7.A	4.C	454
40	A	PSO-5.E	1.D	296–299
41	B	IMP-5.B	3.E	341–342
42	A	IMP-5B	4.C	344–345
43	B	PSO-7A	3.D	453–454
44	E	PSO-7.A	3.F	453–454
45	D	PSO-1.D	5.A	38–39
46	E	SPS-7.B	1.A	452–453
47	C	PSO-7.A	2.B	485, 496–497
48	B	SPS-7.C	1.C	462–464, 469–470
49	E	SPS-7.C	3.B	466–467
50	C	SPS-7.C	2.D	469–470
51	C	SPS-2.B	2.C	112–113
52	C	PSO-6.A	1.A	377–378
53	D	PSO-6C	3.E	377–378
54	C	PSO-6.C	3.E	382–383
55	C	PSO-4.A	2.A	196
56	E	PSO-6.D	4.C	418–419
57	A	SPS-6.A	1.D	375–377
58	C	SPS-6.B	4.B	435–436, 503
59	D	IMP-4.B	4.C	266–267
60	A	SPS-7.B	2.B	455–457

Free-Response Questions Scoring Guidelines

All parts of Question 1 are worth one point each. This essay is worth 7 points total. Skill 1C, 1D, 2B, 2E, 5B

1. In 1983, Sudan erupted into civil war that lasted more than 20 years and resulted in the creation of the country of South Sudan in 2011. Then in 2013, political struggles plunged South Sudan into civil war. The wars have had significant domestic, regional, and international impacts. The UN estimated that both wars created millions of refugees and internally displaced persons.	
A. Compare the concepts of refugees and internally displaced persons (IDP).	<p>Complete answers must describe both a similarity and a difference between IDPs and refugees. Answers <u>must</u> address both concepts. Specific examples are not required but often improve a response.</p> <p>Similarities:</p> <ul style="list-style-type: none"> Both concepts are the result of forced or involuntary migration. People leave or move because their lives are in danger. The reasons are usually political (war), social, or environmental. IDPs and refugees intend to return after the threat is gone. <p>Differences:</p> <ul style="list-style-type: none"> IDPs migrate <u>within</u> their country, while refugees cross an international border (must say both)
B. Describe ONE economic impact of either refugees or IDPs at the country scale.	<p>Response requires claim plus specific details to support the response.</p> <ul style="list-style-type: none"> Increased costs to house, feed and care for either IDPs or refugees For the country or region that people are fleeing, there is a loss of income, jobs and possibly the collapse of the economy. When people return to the region there is a cost to rebuild the infrastructure, buildings or area damaged by the war. Specific to refugees: countries will often need to pay to build walls or fences, or monitor the borders.
C. Compare the concepts of centrifugal and centripetal forces in relation to political stability of a country.	<p>Complete answers must describe both a similarity and a difference between centrifugal and centripetal forces. Answers <u>must</u> address both concepts. Specific examples are not required but often improve a response.</p> <p>Similarities:</p> <ul style="list-style-type: none"> Both forces attempt to relate to measuring or explaining the stability (unity) or instability (disunity) of a country or region. Both forces can be cultural, political, social or economic. This answer requires an example to illustrate students understanding, such as "common religion can be centripetal, while different religions can be centrifugal." <p>Difference:</p> <ul style="list-style-type: none"> Centripetal forces unify or hold groups of people or countries together, while centrifugal forces can cause disunity, break states apart or prevent countries from forming (must say both).

<p>D. Explain ONE centrifugal force in relation to the Sudan or South Sudan civil wars.</p>	<p>Response requires a claim and specific details to support the response. Students may use either conflict.</p> <p>Sudan Civil War (1983–2005)</p> <ul style="list-style-type: none"> ▪ Religious and/or cultural differences: Sudan is mostly Muslim while South Sudan is mostly Christian or local religions. ▪ Ethnic and/or racial tension and/or threat of genocide. ▪ Resource dispute over oil reserves along the borders of South Sudan and Sudan or farmland disputes in Darfur ▪ Political power: Southern Sudanese felt like their views were not represented in the government of Sudan. ▪ Extreme poverty within the region <p>South Sudan Civil War (2013–current)</p> <ul style="list-style-type: none"> ▪ Power struggle for control of the government between competing rivals ▪ Ethnic or tribal conflict ▪ Evidence of ethnic cleansing ▪ Poor economy and/or poverty within South Sudan ▪ Dispute over oil resources and revenue
<p>E. Explain the degree to which the concept of balkanization or shatter-belt explains the region of the Sudan.</p>	<p>Response requires a claim and specific details to support the response. Students must claim a correct relationship and then support that claim with explanation, evidence and/or examples. Students may use either balkanization or shatterbelt but are not required to use both. The claims and reasons must match.</p> <p>Acceptable Claims:</p> <ul style="list-style-type: none"> ▪ The concepts of balkanization or shatterbelts do a (good, adequate, excellent) job of explaining the situation in the Sudan. ▪ The concept of shatterbelt only partially explains the events in the Sudan. <p>Reasons and details:</p> <ul style="list-style-type: none"> ▪ Balkanization (will also accept shatterbelt as a synonym) means the fragmentation of a state into smaller, often hostile states within a region often along ethnolinguistic (cultural) lines. This accurately describes the events in the Sudan between Sudan and southern Sudan fighting a war and splitting into two countries. ▪ A student could focus on the difference in definitions. If so this answer is acceptable. Shatterbelt: a place located between two different contentious regions. This region may fragment due to <u>external aggression</u>. Even though the region fragmented, and is culturally different, the Sudan region does not fit the concept of shatterbelt because this was a civil war with very little external pressure to split.

F. Explain how a unitary government could increase tension within a country.	<p>Response requires a claim and specific details to support the response. Students may use any country.</p> <ul style="list-style-type: none"> ▪ Any one of the following will be given credit. ▪ Unitary governments often express the goals of the majority within a country and not minority groups. ▪ Regionalism: Smaller, less-representative regions of a country may feel that the central government does not understand or represent the special needs of their part of the country. ▪ Large expansive countries: Very large countries may have very different needs in different parts of the country and centralized governments may not have the ability to pass or apply laws specific to each region.
G. Describe how wars or violent boundary disputes can impact the food security of an international region.	<p>Response requires a claim and specific details to support the response. Students responses must be on an international scale.</p> <p>Any one of the following claims is acceptable:</p> <ul style="list-style-type: none"> ▪ Food security decreases ▪ Food insecurity increases <p>Reason/rationale</p> <ul style="list-style-type: none"> ▪ Food production is international/global and when wars or border disputes occur, disruptions of food supply increases. ▪ Inability or reduced ability to produce food or crops. Infrastructure and/or land may be destroyed or inaccessible due to war and/or disputes (international transportation systems). ▪ Environmental damage or pollution of natural resources (water, soil etc.) due to impacts of war spread across borders. Results in decline in productivity. ▪ NGOs and other international or regional aid agencies cannot access the war-torn region to help with shortfalls of food. ▪ As refugees flow across international borders, demand for food increases in bordering countries.

All parts of Question 2 are worth one point each. This essay is worth 7 points total. Skill 1B, 1E, 2C, 2E, 4A, 4C

2. The model shown (galactic city) is a representation of the galactic city model within the United States. Use the model to help respond to the questions.	
A. Identify the major mode of transportation that influences the shape of galactic cities.	<p>Cars or automobiles</p>

<p>B. Explain ONE reason why the airport is located where it is as opposed to near the central business district (CBD).</p>	<p>Response requires claim plus explanation and details to support the response.</p> <ul style="list-style-type: none"> ▪ Land is less expensive and/or more available to develop on the periphery and airports require a lot of land for runways, terminals, parking and other supporting services. Land in the CBD is expensive and scarce. Bid Rent concepts apply. ▪ Noise pollution (complaints): Near the new airport there are fewer residents and/or near an industrial area. Planes do not need to fly over as many residents in these areas. In the CBD planes need to fly over highly populated and densely populated areas. ▪ Access to highways: The airport on the periphery has better access to the highway system in order to transport people and or cargo. Near the CBD: Traffic, narrow streets and/or congestion can be difficult to navigate, especially for large trucks.
<p>C. Explain ONE economic reason why new town centers form near the periphery of the city.</p>	<p>Response requires claim plus explanation and details to support the response.</p> <ul style="list-style-type: none"> ▪ Land values for suburban homes and communities is less expensive and/or more available for development than land closer to the city. These residents desire services. ▪ The interchange between major roads commercial services for suburban residents are more accessible and desired locations for businesses. This increases potential clients for business.
<p>D. The map shown is incomplete in the southern part of the city. Explain ONE reason a specific land use, other than a new town center, is likely to occur on the southern end of the city between the two beltways.</p>	<p>Response requires a claim and explanation and details to support the response.</p> <ul style="list-style-type: none"> ▪ Lower density residential homes (suburbs) ▪ Shopping mall ▪ Technology complex ▪ South East-Industrial District ▪ Edge City ▪ Open space (parks) ▪ Service centers for local population ▪ Mass transit stations: train or bus centers near the intersections of the highways <p>Not accepted: airport, gentrified neighborhood, CBD or New Town Center (excluded in prompt)</p>
<p>E. Explain to what degree the galactic city model accurately describes the location of commercial land use in cities within the United States.</p>	<p>Response requires claim plus explanation and details to support the response.</p> <ul style="list-style-type: none"> ▪ This model does a good job of explaining car dependent postindustrial cities particularly, west of the Appalachian Mountains and in the southeast United States. ▪ This model is less effective for north-east cities: older, denser and are more influenced by rail and water. ▪ The model as shown does not account for physical geography such as hills, mountains or water (rivers, lakes, etc). Physical geography can impact land value and accessibility. ▪ Model does not account for the current trend of many people moving back into the city from the suburbs. ▪ Model does not take into account the effects of mass transit on the development of some cities.

(Continued)

F. Describe ONE negative environmental impact of the land-use patterns shown in the galactic city model.	<p>Response requires a claim and specific details to support the response.</p> <ul style="list-style-type: none">▪ Air or noise pollution from car-dependent transportation system.▪ Sprawling city leads to loss of farmland, open space or habitat for plants and animals.
G. Describe a challenge of using public mass transit with the land use patterns shown in the galactic city model.	<p>Response requires a claim and specific details to support the response.</p> <ul style="list-style-type: none">▪ Mass transit is more efficient with a compact city design▪ Many people commute around the outside of the city and not to the CBD. Most mass transit routes travel from the outside to the inside of the city.▪ The cost to build mass transit systems can be expensive to buy land and the rail system▪ People like the independence of driving cars.▪ Galactic cities have many car-dependent suburbs

All parts of Question 3 are worth one point each. This essay is worth 7 points total. Skill 1D, 2A, 2B, 5B

3. Lingua franca languages often threaten endangered languages. Use the excerpt and the chart to answer the questions that follow.	
A. Explain ONE reason why languages such as Kallawaya are becoming extinct.	<p>Response must include a claim and specific details that answers why the pattern is occurring.</p> <ul style="list-style-type: none">▪ Threat of Other Languages: As lingua franca or a global language such as Spanish, Portuguese, or English becomes widely used, it replaces indigenous languages such as that of the Kallawaya.▪ Migration of Young People: As young people from indigenous cultures move away to cities, many use the language of the city and lose their native language.▪ Older People Dying: When young people do not learn a language or they move away, the language becomes known only by the elderly. As they die, so does the language.▪ Loss of Isolation: Many indigenous languages develop in isolation. However, there are very few cultures that are still isolated from changes outside of their folk environment, so their languages are changing or being replaced.

<p>B. Explain ONE historical factor that explains how Spanish diffused to Peru or the greater South American region.</p>	<p>Response must include a claim and specific details as to how Spanish diffused.</p> <ul style="list-style-type: none"> ▪ Claim: Conquest, Imperialism or Colonialism: ▪ Details: Anyone of the following will be sufficient to meet the threshold of a point. <ul style="list-style-type: none"> ◦ Spain expanded its empire in the Americas beginning with Columbus in 1492. Once the Spanish arrived their language diffused to any area that they conquered. ◦ The search for gold (wealth), spreading God or glory (power) were all reasons that Spain expanded into the Americas and brought Spanish with them. ◦ The imposed Spanish systems of government and established Spanish as an official language or was used as a lingua franca.
<p>C. Describe ONE economic reason why Spanish or English have become the dominant lingua franca of many countries.</p>	<p>Any of the following will be awarded credit as long as the response accurately describes the reason. Better answers will include an example but that is not required.</p> <ul style="list-style-type: none"> ▪ Multinational corporations often use English, Spanish or Portuguese and English has become the common language for international business. ▪ Selling products: Internet and television advertising are often in English. ▪ Having a common language in a country lowers the cost of printing signs, providing education, or making important announcements.
<p>D. Describe ONE political policy that local governments can use to preserve endangered languages.</p>	<p>Any of the following will be awarded credit as long as the response accurately describes the reason. Better answers will include an example but that is not required.</p> <ul style="list-style-type: none"> ▪ Governments may create laws that require the use of the threatened language in any of the following ways: public education, sign laws, official documents ▪ Government sponsored campaigns promoting benefits of being multilingual ▪ Government funding to preserve and record speakers of threatened languages ▪ Laws or policies to protect indigenous people's land and/or isolation from outside threats ▪ Grant official status to threatened languages.
<p>E. Describe ONE way that technology is being used to preserve threatened languages.</p>	<p>Any of the following will be awarded credit as long as the response accurately describes the reason. Better answers will include an example but that is not required.</p> <ul style="list-style-type: none"> ▪ Using computer, digital, social media, or Internet resources to connect, record or create communities of threatened language speakers. ▪ Creating catalogs and or recording of music, songs, stories or other linguistic elements of the threatened culture.

F. Using a language different than ones previously discussed, identify a region or country in the Eastern Hemisphere and its lingua franca.	<p>Any of the following will be awarded credit.</p> <ul style="list-style-type: none"> ▪ Many East African countries speak Swahili. ▪ The use of Mandarin in China. ▪ There are numerous possible responses, but English or Spanish may not be used.
G. Using a language different than ones previously discussed, identify a region or country in the Western Hemisphere and its lingua franca.	<p>Any of the following will be awarded credit.</p> <ul style="list-style-type: none"> ▪ French in French Guiana (South America), Haiti, Quebec (Canada), many Caribbean Islands ▪ Quechua: much of South America ▪ Portuguese in Brazil ▪ English or Spanish may not be used as responses

Justice and Race:

Teacher Resources and Activities

UNIT 1 Thinking Geographically

CHAPTER 1 Maps and Geographic Data

TOPIC 1.1 Introduction to Maps

Map Projections and Controversies

Course Skill 1.E: Explain the strengths, weaknesses, and limitations of different geographic models and theories in a specified context.

Essential Knowledge IMP-1.A.3: All maps are selective in information; map projections inevitably distort spatial relationships in shape, area, distance, and direction.

Reproducible Page: See Teacher Resource page 125 for the excerpt, maps, and questions.

Questions and Possible Responses

1. Some experts have suggested that classrooms should use a variety of map projections. What would be benefits and challenges of such a suggestion?

Possible Responses

- It would benefit students to have access to many projections. They would be able to evaluate and understand maps' strengths and weaknesses better. Students will identify parts of the world as having oversized importance in certain projections.
 - Using lots of different map projections is impractical. Maps are expensive, and most classrooms have room for only one large map. Students can learn about geography without looking at many different map projections. Too many projections are confusing.
2. Examine the map projections and the strengths and weaknesses of each. Notice the relative sizes of the areas mentioned in the excerpt (Africa, Canada, and Europe) on each map projections. Do you agree with Frederick-Clarke's opinion that the Mercator projection is imbalanced and that it reflects a (European) colonizer's view of the world? Why or why not?

Possible Responses

- The Mercator projection shows places near the equator, such as Africa, as smaller than they really are compared with northern places such as Europe. That makes many colonized places seem less important than former colonizing countries of Europe. Therefore, it makes sense to say that the Mercator projection is imbalanced and reflects the point of view of colonizers.
 - Topic 1.1 states the Mercator projection was designed to be accurate about distances between countries. Every map projection has strengths and weaknesses. To call it imbalanced or to say it reflects the point of view of colonizers is therefore inaccurate.
3. Use the Internet to research how different countries represent the world in their maps. For example, look for world maps created in North Korea, Japan, or China. Then look for an azimuthal projection from the North Pole or the South Pole. How do these compare with maps created by Europeans or North Americans? How might a country's world map affect how it views its place in the world and other countries' places in the world?

Possible Responses

- World maps created in North Korea, Japan, and China usually have the Pacific Ocean in or near the middle of the map. World maps created in North America often show North and South America in or near the middle. World maps created in Europe often show Europe and Africa in or near the middle.

- Azimuthal projections make the land near the North Pole or the South Pole seem larger and more important than the rest of the world.
- People who create world maps often put their own country or region in the middle. Based on this, it's likely that a country's world map might make the people of that country feel more important than people who live in other countries or regions.

CHAPTER 2 Spatial Concepts and Geographic Analysis

TOPIC 1.7 Regional Analysis

Stereotypes and Non-Native Speakers

Course Skill 1.A: Describe geographic concepts, processes, models, and theories.

Essential Knowledge SPS-1.A.2: Types of regions include formal, functional, and perceptual/vernacular.

Reproducible Page: See Teacher Resource page 127 for the excerpt and questions.

Questions and Possible Responses

1. Based on what you learned in Topic 1.7, in what world region and subregion did Ebrima Jallow live before he moved to the United States?

Possible Responses

- He lived in Gambia, which is in the world region of Africa.
- Gambia is part of the subregion of West Africa.

2. In Topic 1.7, you learned that nearly 80 percent of the people in the United States speak English at home, yet millions have a non-English primary language. What does this statistic and the article reveal about language in the United States and other countries?

Possible Responses

- Even people who are learning English or are fluent in English may be discriminated against or mocked for having an accent in the United States and other countries.
- In all countries, language and accents cause people to have perceptions and make assumptions about the speaker.
- The United States and a handful of other countries have protections for people's linguistic rights.

3. Use the Internet to research Gambia, the country Jallow came from. What is the official language there? What other languages do people speak there? Why do you think Jallow's manager perceived him as belonging to another region based on his speech?

Possible Responses

- English is the official language of Gambia.
- Many people in Gambia speak Mandinka, Wolof, or both. Some Gambians speak Pulaar, Serer, Diola, and Soninke.
- Even though Jallow may have grown up speaking English, he probably spoke English with a distinct accent because he grew up in a different world region. Or he may have grown up speaking another language and learned English as an adult. Either way, the manager probably perceived Jallow as "other" based on Jallow's accent. The manager may also have perceived Jallow as "other" based on his appearance, but the article excerpt does not specify that.

UNIT 2 Population and Migration Patterns and Processes

CHAPTER 3 Population Distribution and Composition

TOPIC 2.2 Consequences of Population Distribution

Access to Clean Drinking Water and Plumbing

Course Skill 2.C: Explain a likely outcome in a geographic scenario using geographic concepts, processes, models, or theories.

Essential Knowledge PSO-2.D.1: Population distribution and density affect political, economic, and social processes, including the provision of services such as medical care.

Reproducible Page: See Teacher Resource page 129 for the excerpt, map, and questions.

Questions and Possible Responses

1. People often assume the systems and services provided by infrastructure are accessible for everyone. How does the example of access to clean drinking water show that this is not always true?

Possible Responses

- Even though infrastructure makes clean water a given in many neighborhoods, people still need plumbing systems and treatment plants to make sure their water is safe to drink. These systems are costly to create and maintain.
 - Even if water is available, people may not have access to it if they lack plumbing.
2. You have learned the environment and human activities have significant effects on each other. What are some ways that having limited access or no access to clean drinking water might affect a person or a community? What do the patterns of access to clean water reveal about population distribution in the United States?

Possible Responses

- People without access to safe, clean drinking water might get sick more often. That could cause them to miss work, lose their jobs, or be unable to work for periods of time.
 - People who don't have reliable plumbing might have to spend significant time and energy getting clean drinking water. That is time they can't spend on common daily tasks.
 - Areas of Appalachia, the South, and West Coast that have challenges with access to drinking water and sanitation are areas with lower population density. The people of these areas are often from marginalized and minority groups.
 - State and local governments don't provide equal access to clean drinking water. Some governments lack the resources to ensure clean drinking water or to maintain related elements of infrastructure.
3. Use the Internet to research access to clean drinking water in developing countries. What are people, groups, and governments doing to help solve this problem?

Possible Responses

- People have invented personal filter straws that remove bacteria and contaminants from water.
 - Some countries are building new desalinization plants to make undrinkable water drinkable.
 - Some areas have waste-to-water solutions, which means they recycle human waste and sewage.
 - Some individuals and nonprofit groups are building latrines to help prevent human waste from getting into the water supply.
-

CHAPTER 4 Population Change

TOPIC 2.6 Malthusian Theory

Malthusian Theory and Fertility Rates

Course Skill 2.B: Describe geographic concepts, processes, models, and theories.

Essential Knowledge IMP-2.B.3: Malthusian theory and its critiques are used to analyze population change and its consequences.

Reproducible Page: See Teacher Resource page 131 for the excerpt, graph, and questions.

Questions and Possible Responses

1. According to the excerpt, how did lawmakers, judges, and other powerful people use Malthusian theory to justify their beliefs?

Possible Responses

- They thought that they could restrict who could have children.
 - They thought that it was morally acceptable to ignore others' hunger based on what Malthus wrote.
 - They thought it was inevitable that people in certain groups would starve.
 - These conclusions were often based on a belief of socioeconomic and ethnic superiority.
2. Does the information in the graph support or contradict the ideas of Thomas Malthus? Explain. How does Malthusian theory apply to countries of different levels of development?

Possible Responses

- It contradicts his ideas.
 - Even though the total global population is increasing, fertility rates are decreasing throughout the world.
 - Malthus believed that humans would not control their fertility rates, even if that meant some people starved to death.
 - Wealthier and more-developed countries have lower birth rates and fewer issues with food security than less-developed countries. More-developed nations have led the way in developing solutions to food insecurity.
3. Use the Internet and Topic 5.5 to research Norman Borlaug and the Green Revolution. How has the Green Revolution affected global human population?

Possible Responses

- Norman Borlaug was an American scientist. He was responsible for breakthroughs in agricultural technology.
- Borlaug developed new, hardier types of wheat and rice. His work has saved up to 1 billion people from hunger and death.
- The Green Revolution has greatly increased farmers' harvests, which has reduced the amount of suffering in the world and allowed the global human population to increase.

CHAPTER 5 Migration

TOPIC 2.11 Forced and Voluntary Migration

Geospatial Data on U.S. Lynchings

Course Skill 1.D: Describe a relevant geographic concept, process, model, or theory in a specified context.

Essential Knowledge IMP-2.D.1: Forced migrations include slavery and events that produce refugees, internally displaced persons, and asylum seekers.

Reproducible Page: See Teacher Resource page 133 for the excerpt, map, and questions.

Questions and Possible Responses

1. In what ways might geospatial data about lynchings in the United States be as useful as or more useful than information about individual lynchings at particular locations?

Possible Responses

- The geospatial data give us an idea of how frequent and widespread the crime of lynching was in a particular region at a particular time.
 - Geospatial data and information about individual lynchings are both useful and important. Information about individual lynchings helps us understand what factors led to certain lynchings and how lynchings affected the survivors.
2. By the time Reconstruction ended in 1877, African Americans had equal protection of the law. Why did lynchings and other acts of terror continue until 1950 and beyond? What patterns are shown in the map about lynchings and acts of terror?

Possible Responses

- Lynchings and other acts of terror were used to prevent Black Americans from exercising rights and freedoms following the Civil War.
 - Into the 20th century, as African Americans slowly began to gain more rights and exercise those rights, lynchings and other acts of terror continued.
 - The map shows that most of these acts took place in the South. More specifically, acts of terror were more common from Louisiana to Florida.
3. Use the Internet to research the Great Migration in the United States. Do the sources that you found describe it as the result of forced or voluntary migration? How does the geospatial information shown on this page help you understand the causes of the Great Migration?

Possible Responses

- Sources describe the Great Migration as being the result of “pull” factors (for example, higher wages and more job opportunities in northern cities). These are examples of voluntary migration.
- Sources describe the Great Migration as being the result of “push” factors (for example, escaping acts of terror) and “pull” factors (for example, higher wages and more job opportunities in northern cities). These are examples of forced migration and voluntary migration.
- Racial murders were widespread. This trend continued until the time of the Great Migration, causing many Black people moved north.

UNIT 3 Cultural Patterns and Processes

CHAPTER 6 Cultural Landscapes, Patterns, and Diffusion

TOPIC 3.2 Cultural Landscapes

A Mountain's Name in Different Languages: Denali and McKinley

Course Skill 3.E: Explain what maps or data imply or illustrate about geographic principles, processes, and outcomes.

Essential Knowledge PSO-3.C.1: Attitudes toward ethnicity and gender, including the role of women in the workforce; ethnic neighborhoods; and indigenous communities and lands help shape the use of space in a given society.

Reproducible Page: See Teacher Resource page 135 for the excerpts and questions.

Questions and Possible Responses

1. How does the name of this mountain demonstrate the concept of cultural landscape?

Possible Responses

- The mountain's name reflects the values of the culture from which its name comes.
- Denali reflects the values of the Native Americans of the area, and Mount McKinley reflects the preferences of Americans of European descent.

2. Why do you think place names are sometimes controversial?

Possible Responses

- People have different ideas about which religion, ethnicity, or other factor should be most important when describing a place.
 - People have different ideas about what is most important about a place.
 - People have different ideas about which language or languages to use when naming a place.
3. Use the Internet to research controversies related to Native American names. For example, look for information about names of tribes or sports teams. Why do you think some people care so passionately about what a group or place should be named?

Possible Responses

- Some Native Americans object to the names that white settlers or rival Native American peoples gave to their ancestors.
- Some people object to giving sports teams or sports mascots nicknames related to Native Americans. These names may seem insulting because they devalue cultural identity.
- Giving something a name is a way of exerting power over it. The name of a place or group affects how people think of that place or group.

CHAPTER 7 Historical and Contemporary Processes of Diffusion

TOPIC 3.5 Historical Causes of Diffusion

Economics and Endangered Languages

Course Skill 2.C: Explain a likely outcome in a geographic scenario using geographic concepts, processes, models, or theories.

Essential Knowledge SPS-3.A.2: Colonialism, imperialism, and trade helped to shape patterns and practices of culture.

Reproducible Page: See Teacher Resource page 137 for the excerpt, map, and questions.

Questions and Possible Responses

1. Based on Topic 3.5 and the excerpt, why do you think Alaskan languages never diffused widely throughout the world?

Possible Responses

- Native Alaskans did not colonize other parts of the world.
 - Alaskan languages have not been used as lingua francas.
 - No Alaskan language is the basis of a religion that has a widespread global following.
2. Based on Topic 3.5 and the excerpt, why do you think economic factors are the primary cause of language loss? For a culture with a threatened language, are the economic benefits that accompany the adoption of a more widely used language justifiable?

Possible Responses

- For many people or groups, the economic benefits of adopting a dominant language are great. Often, people and groups that speak threatened languages are from poorer areas.

- Students may claim educational and business opportunities are worth the loss of a language for economically disadvantaged groups.
 - Students may claim the cultural and linguistic history of a group are more significant than financial gain. Also, the loss of language doesn't have to accompany the economic advancement of a group of people.
3. Use the Internet to research language preservation. How are people using technology to keep rare languages alive?

Possible Responses

- People are creating dictionaries of endangered languages.
- Native speakers and researchers are recording histories and descriptions of traditions.
- Experts are translating oral stories.
- Some researchers and private companies are creating websites that allow users to “adopt” near-extinct languages.
- Google launched a project to help save endangered languages. It includes interactive maps and videos.

UNIT 4 Political Patterns and Processes

CHAPTER 8 Political Processes and Power

TOPIC 4.2 Political Processes

Nigeria, Colonialism, and Independence Movements

Course Skill 3.E: Explain what maps or data imply or illustrate about geographic principles, processes, and outcomes.

Essential Knowledge PSO-4.B.2: Colonialism, imperialism, independence movements, and devolution along national lines have influenced contemporary political boundaries.

Reproducible Page: See Teacher Resource page 139 for the excerpt, map, and questions.

Questions and Possible Responses

1. What motivations did the British have to create the borders of Nigeria where they did? How did the British and other European powers justify their division of Africa?

Possible Responses

- Britain created the borders of Nigeria where it did because it would be easier to control as one political entity.
- Britain wanted resources for industrialization, economic and political power, wealth acquisition, and territorial expansion.
- As a colonizer, Britain assumed the right to set borders for its colonies.
- The British had the most political and economic power in the world, a sense of ethnic superiority, and a belief in Social Darwinism (survival of the fittest).

2. What challenges do you think countries that have many ethnicities face politically and socially?

Possible Responses

- With many ethnicities, it would be difficult to treat every ethnic group the same.
- Larger, richer, or more politically powerful ethnic groups might oppress other groups.
- People in some oppressed ethnic groups might seek independence.

3. Use the Internet to research an independence movement. For instance, you might choose Quebec, South Sudan, or Biafra. Did the independence movement result in a new country?

Possible Responses

- Answers will vary depending on the independence movement chosen.
- South Sudan became a sovereign country in 2011.
- As of 2021, neither Quebec or Biafra has gained independence.

CHAPTER 9 Political Boundaries and Forms of Governance

TOPIC 4.5 The Function of Political Boundaries

Bolivia, Chile, and Coastal Access

Course Skill 5.D: Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects across various geographic scales.

Essential Knowledge IMP-4.B.3: Land and maritime boundaries and international agreements can influence national or regional identity and encourage or discourage international or internal interactions and disputes over resources.

Reproducible Page: See Teacher Resource page 141 for the excerpt, map, and questions.

Questions and Possible Responses

1. How does this incident show the challenges of living in a landlocked country?

Possible Responses

- Landlocked countries have to depend on non-landlocked countries to transport goods for trade.
 - Because imports and exports have to go through another country, a landlocked country is at a disadvantage economically and strategically.
 - If a landlocked country has a disagreement with its non-landlocked neighbor, that neighbor may be able to cut off the landlocked country's economic access to other countries.
2. Based on the map and excerpt, do you agree with the claim made by the Bolivian president that Chile's actions showed "neocolonial racism"? Explain your answer.

Possible Responses

- Students may argue that Chile is not exhibiting "neocolonial racism." Chile has sovereignty over its land and, therefore, the right to determine access to the ports. In addition, an international court ruled Chile did not have to negotiate access to the coast.
 - Students may argue that Chile is exhibiting "neocolonial racism." Chile has not upheld its agreement from a 1904 treaty to allow Bolivia access to certain ports—treating Bolivia as a colonial holding rather than a neighboring country. In addition, Chilean leaders did not recognize the status of the Bolivian foreign minister, which some interpreted as cultural superiority.
3. Use the Internet to research another landlocked country. For instance, you might choose Botswana, Mongolia, or Moldova. What challenges has that country faced because it is landlocked?

Possible Responses

- Answers will vary depending on the landlocked country chosen.
- Botswana has done well economically, partly because of diamond resources, but also because of a democratic political structure and long-term stability.
- Mongolia is sparsely populated, and a large portion of its people still live in poverty. However, the country has a market economy, a cashmere industry, and a growing tourism industry.

- Moldova has been independent since 1991. Changing from a controlled economy to a free-market economy has been difficult.

CHAPTER 10 Challenges in the Modern State

TOPIC 4.8 Defining Devolutionary Factors

Ethnic Cleansing of Uyghur Muslims

Course Skill 3.E: Explain what maps or data imply or illustrate about geographic principles, processes, and outcomes.

Essential Knowledge SPS-4.A.1: Factors that can lead to the devolution of states include the division of groups by physical geography, ethnic separatism, ethnic cleansing, terrorism, economic and social problems, and irredentism.

Reproducible Page: See Teacher Resource page 143 for the excerpt, map, and questions.

Questions and Possible Responses

1. What responsibilities do international organizations and other countries have to get involved when these types of internal devolutionary crises occur?

Possible Responses

- Students may argue that the purpose of international organizations is to defend people whose rights and protections are in danger.
- Students may argue that governments have a responsibility to protect human rights if another country's government abuses them.
- Students may argue that a foreign government should not get involved in the affairs of a sovereign country and that international organizations should take the lead in addressing these types of crises.

2. Based on the map and what you read in Chapter 10, what challenges might the Uyghurs face if they seek independence from China?

Possible Responses

- China might be unwilling to allow independence to a region as large as Xinjiang. Independence for a region so large would weaken China.
- The independence of the Uyghurs might not be recognized by countries that are politically or economically allied with China.
- The Uyghurs might have difficulties creating a stable government and economic ties with other countries.
- If Xinjiang were to become independent, it would face economic and strategic challenges of being landlocked.

3. Use the Internet to research what companies that have economic ties to China have done to address these alleged human rights abuses.

Possible Responses

- Many major companies and brands have continued to do business with China and use resources from the Xinjiang region. They have not acknowledged possible abuses of the Uyghur population.
- Chinese officials have encouraged Chinese consumers to boycott companies that have expressed concerns about forced labor and human rights abuses against Uyghurs.
- Numerous companies claimed they have and are continuing to reduce purchasing resources, particularly cotton and textiles, produced in the Xinjiang region.

UNIT 5 Agriculture and Rural Land-Use Patterns and Processes

CHAPTER 11 Origins, Patterns, and Settlements of Agriculture

TOPIC 5.1 Physical Geography and Agriculture

Black Americans and Farming

Course Skill 2.D: Explain the significance of geographic similarities and differences among different locations and/or at different times.

Essential Knowledge PS0-5.A.1: Agricultural practices are influenced by the physical environment and climatic conditions, such as the Mediterranean climate and tropical climates.

Reproducible Page: See Teacher Resource page 145 for the excerpt, data table, and questions.

Questions and Possible Responses

1. Based on the article, what factors have affected the ability of African American farmers, like members of the Bridgeforth family, to own land and farm?

Possible Responses

- The people in charge of processing federal loans denied or delayed them to Black Americans.
- Local banks and businesses often shortchanged or shunned Black farmers.
- White farmers wanted to take over the land.
- The Ku Klux Klan used racial terror tactics.

2. Based on the information in the table, what conclusions can you draw about younger Black Americans and farming?

Possible Responses

- Very few farms owned by Black Americans are profitable enough to support a family.
- In 2012, the vast majority of Black American farmers were 45 or older.
- It is unlikely that large numbers of young Black Americans will become farmers soon.

3. Use the Internet to research the number of Black farmers in America. How has the number changed? What might account for the differences over time?

Possible Responses

- African Americans accounted for 14 percent of farm owners in 1910 but comprised 1.6 percent in 2012.
- Black farmers have lost 80 percent of the farmland they owned in 1910—about 12 million acres lost.
- There were about 25,000 Black farm owners in 1910.
- Changes can be attributed to fewer loans and economic opportunities being afforded to Black farmers, racial prejudice, and an overall decrease in the number of farmers in the United States.

CHAPTER 12 The Second and Third Agricultural Revolutions

TOPIC 5.5 The Green Revolution

Technology, Capital, and Farming in Developing Countries

Course Skill 2.D: Explain the significance of geographic similarities and differences among different locations and/or at different times.

Essential Knowledge PSO-5.A.1: The Green Revolution had positive and negative consequences for both human populations and the environment.

Reproducible Page: See Teacher Resource page 147 for the excerpt, graph, and questions.

Questions and Possible Responses

1. How successful was the Green Revolution in Mexico? Support your opinion with information from the excerpt, graph, and Topic 5.5.

Possible Responses

- Most students will say that the Green Revolution was not a complete success.
 - Students may argue the graph shows that wheat yields increased dramatically and stayed higher than in India and Pakistan.
 - Students may argue the excerpt indicates that many small farmers who did not have access to capital ended up displaced rather than helped.
 - Some students may say that the Green Revolution was a complete success. The goal of the Green Revolution was to find ways to grow more crops on more land, and that is exactly what happened. These students may argue that social, political, and economic factors should not affect evaluations of the Green Revolution.
2. How did access to capital affect the degree of success Mexican farmers had during the Green Revolution?

Possible Responses

- Farmers needed access to water, pesticides, herbicides, and fertilizers. Those who could not afford those resources, mostly small farmers, did not succeed.
 - The excerpt states that poorer farmers got displaced as richer farmers increased their farm sizes.
3. Use the Internet to research subsistence farming in another part of the world besides Mexico. In what ways (if any) has technology changed this type of farming?

Possible Responses

- Answers will vary depending on the parts of the world students chose to research.
- Some students may focus on the fact that India still has many subsistence farmers.
- Some students may focus on how climate change, which has been brought about in part by technology, affects subsistence farming in different countries.

CHAPTER 13 Spatial Arrangement of Agriculture

TOPIC 5.8 Von Thünen Model

Where Do Our Flowers Grow? Why Do They Grow There?

Course Skill 5.B: Explain spatial relationships across various geographic scales using geographic concepts, processes, models, or theories.

Essential Knowledge PSO-5.D.1: Von Thünen's model helps to explain rural land use by emphasizing the importance of transportation costs associated with distance from the market; however, regions of specialty farming do not always conform to von Thünen's concentric rings.

Reproducible Page: See Teacher Resource page 149 for the excerpt, data table, and questions.

Questions and Possible Responses

1. Today, more than 80 percent of cut flowers purchased in the United States are grown in other countries. Is this consistent with von Thünen's model? Explain how recent changes in growing flowers affects where they are produced.

Possible Responses

- This is not consistent with von Thünen's model. New technologies mean that commercially grown flowers are no longer limited to zones that are close to markets.

- The increased profitability of the cut-flower industry has allowed producers to be farther away from the market.
 - Improvements in refrigeration, transportation, and storage have allowed for flowers to be produced farther away from their intended markets.
2. According to the excerpt, what potential social or environmental concerns are associated with the cut-flower industry? Which of the countries in the table might have the most difficulties addressing those concerns? Explain your answer.

Possible Responses

- One concern is the use of highly toxic chemicals that harm the workers and the environment. Additionally, the farms are riddled with labor abuses, toxic waste, and overuse of local water and energy sources.
 - The developing countries will have the most difficulties addressing the social or environmental concerns—Columbia, Ecuador, Kenya, Ethiopia, and Malaysia. These difficulties could be related to unstable political systems or lack of resources to address the problems.
3. Use the table above and the Internet to research one of the top producers of cut flowers other than Colombia. How has the von Thünen model affected where farmers grow this crop?

Possible Responses

- Most cut flowers used to come from nearby areas. A farmer would sell cut flowers in one or maybe two markets.
- Now, cut flowers can come from distant countries and can be available for sale in many markets. Flowers grown in Kenya are now available in Europe.
- Cut flowers are now Kenya's number-two export after tea. Flowers account for about one percent of the country's gross domestic product.

CHAPTER 14 Challenges and Consequences of Agricultural Practices

TOPIC 5.12 Women in Agriculture

Gender Inequalities in Farming

Course Skill 3.D: Compare patterns and trends in maps and in quantitative and geospatial data to draw conclusions.

Essential Knowledge IMP-5.C.1: The role of females in food production, distribution, and consumption varies in many places depending on the type of production involved.

Reproducible Page: See Teacher Resource page 151 for the excerpt, graph, and questions.

Questions and Possible Responses

1. According to the excerpt, 12.8 percent of the world's agricultural landowners are women. What factors might explain why that percentage is lower than that of women in the agricultural labor force?

Possible Responses

- Female farmers are denied access to finance and capital.
 - Women are denied property ownership in many countries.
 - Women are often denied political power.
2. According to the bar graph, what are patterns in the data about women in the agricultural labor force? What factors might explain the changes over time and across different locations in these patterns?

Possible Responses

- The percentage of females in the agricultural labor force has increased on every continent except Europe.
 - North Africa had the largest increase in the percentage of women in the agricultural labor force between 1980 and 2010.
 - Between 1980 and 2010, more women became involved in agricultural labor.
 - Factors responsible for the change include men moving to urban areas to search for jobs, more agribusiness related jobs, increases in loans for female farmers, and changing gender roles.
3. Use the Internet to research farming and gender inequality. What steps are some groups and countries taking to try to solve this problem?

Possible Responses

- A private, business-funded group called Corteva has surveyed thousands of respondents in 17 countries and found that widespread sexism still exists in agriculture.
- The United Nations Food and Agriculture Organization has released a study on gender in agriculture.

UNIT 6 Cities and Urban Land-Use Patterns and Processes

CHAPTER 15 Origin, Distribution, and Systems of Cities

TOPIC 6.1 The Origin and Influence of Urbanization

Digital Divides

Course Skill 2.D: Explain the significance of geographic similarities and differences among different locations and/or at different times.

Essential Knowledge PSO-6.A.2: Changes in transportation and communication, population growth, migration, economic development, and government policies influence urbanization.

Reproducible Page: See Teacher Resource page 153 for the excerpt, graph, and questions.

Questions and Possible Responses

1. In what way are the excerpt and the graphs describing the same problem? In what ways are they describing different problems?

Possible Responses

- The excerpt and graphs are all describing digital divides—in other words, unequal access to technology.
 - The excerpt is primarily describing a digital divide based on race. The graphs are describing a digital divide based on whether people live in urban, suburban, or rural areas.
2. Consider the impact of communication networks on people of various ethnicities and who live in different areas. What might be some effects if all people had access to reliable, high-speed Internet?

Possible Responses

- If people had reliable, high-speed Internet access, more economic opportunities would be available to non-White Americans.
- If people had reliable, high-speed Internet access, economic growth would be more likely in urban areas.
- If people had reliable, high-speed Internet access, they might decide to live farther from where they work.

- If people had reliable, high-speed Internet access, more people might decide to live in rural areas where land costs less and the cost of living is lower compared to urban areas.
3. Use the Internet to research the digital divide in other parts of the world. Check the dates of the sources you find, and focus on the most recent ones. What steps are some groups and countries taking to solve this problem?

Possible Responses

- The United Nations reports that there is a digital divide between the United States and China, which have fairly extensive digital resources, and Africa and Latin America, which have far less technology access. The UN claims that if this divide persists, it will increase global inequality.
- According to *Harvard Business Review*, countries such as Singapore, Finland, and Hong Kong are excelling at technology access. Countries such as Bolivia, Nigeria, and Ethiopia are falling behind.
- The U.S. Federal Communications Commission spent \$3.2 billion to improve Internet access and affordability.

CHAPTER 16 Urban Structure

TOPIC 6.5 The Internal Structure of Cities

Zoning and Inequalities

Course Skill 1.E: Explain the strengths, weaknesses, and limitations of different geographic models and theories in a specified context.

Essential Knowledge PSO-6.D.1: Models and theories that are useful for explaining internal structures of cities include the Burgess concentric-zone model, the Hoyt sector model, the Harris and Ullman multiple-nuclei model, the galactic city model, bid-rent theory, and urban models drawn from Latin America, Southeast Asia, and Africa.

Reproducible Page: See Teacher Resource page 155 for the excerpt, image, and questions.

Questions and Possible Responses

1. Do you agree with the authors of the excerpt that zoning laws exhibit racism? Why do zoning laws continue to exist today?

Possible Responses

- Students might argue that residential zoning laws have created segregated areas based on ethnic, religious, cultural, or income differences.
- Within cities, zoning creates a central business district to be the focus of transportation and services.
- Many cities have industrial and commercial zones to prevent residential areas from being exposed to excess noise and pollution.
- Some people believe zoning is used to prevent people of different races, religions, cultures, or socioeconomic status from living in certain neighborhoods.

2. How have zoning laws led to short-term and long-term problems for communities?

Possible Responses

- In the short term, zoning laws can lead to segregated neighborhoods.
- In the long term, zoning laws can contribute to a permanent underclass that can't build enough wealth to own a home.

3. Use the Internet to find out whether your community has zoning laws. What restrictions, if any, are in place? What are the benefits and potential drawbacks of these restrictions?

Possible Responses

- Answers will vary depending on students' location.
- Most students will find that their community has zoning laws.
- Benefits of zoning laws can include protection from the excessive noise and pollution of some commercial zones.
- Drawbacks of zoning laws can include segregation and the shutting out of poorer people from the housing market.

CHAPTER 17 Urban Challenges and Sustainability

TOPIC 6.9 Urban Data

Neighborhood Studies of Life Expectancy

Course Skill 3.E: Explain what maps or data imply or illustrate about geographic principles, processes, and outcomes.

Essential Knowledge IMP-6.E.1: Quantitative data from census and survey data provide information about changes in population composition and size in urban areas.

Reproducible Page: See Teacher Resource page 157 for the excerpt, map, and questions.

Questions and Possible Responses

1. What information would researchers have missed if they had studied only the life expectancy of St. Paul in general rather than St. Paul's neighborhoods in particular?

Possible Responses

- They would have averaged the life expectancy rates together and probably would not have noticed the extreme differences between neighborhoods.
- They would have found a rate in between the two extremes.

2. Other than a lower life expectancy, what data would you expect to see for the Rondo neighborhood compared to other neighborhoods in St. Paul?

Possible Responses

- The Rondo neighborhood will likely have many residents who live in poverty.
- The educational level (especially college education) of residents of the Rondo neighborhood will likely be lower than for those in surrounding neighborhoods.

3. Use the Internet to research life expectancy in different countries. Do you think local-level communities' life expectancies would be different than the national scale data? Why or why not?

Possible Responses

- Some nations are more racially homogenous, so there might not be as large a difference in average life expectancy in different neighborhoods, cities, or regions.
- Every nation has rich areas and poor areas, so there would probably be at least some difference in average life expectancy in different neighborhoods, cities, or regions.

UNIT 7 Industrialization and Economic Development Patterns and Processes

CHAPTER 18 Industrial and Economic Development

TOPIC 7.1 The Industrial Revolution

Racial Disparities in Exposure to Pollution

Course Skill 6.D: Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects across various geographic scales.

Essential Knowledge SPS-7.A.1: Industrialization began as a result of new technologies and was facilitated by the availability of natural resources.

Reproducible Page: See Teacher Resource page 159 for the excerpt, graph, and questions.

Questions and Possible Responses

1. In Topic 7.1 you read about deindustrialization. How might this process affect environmental racism in developed countries, such as the United States, and in developing countries?

Possible Responses

- In developed countries, deindustrialization might lead to less pollution in currently polluted areas as factories close or move elsewhere.
- In developed countries, deindustrialization might lead to the same amount of pollution or more pollution for mostly non-White neighborhoods if a community is unable to come up with an adequate financial substitute for the changing or departing industries.
- Many industries are being moved to developing countries to take advantage of less-strict environmental regulations. Fewer regulations in developing countries are likely to make the effects of environmental racism worse than in developed countries.

2. Imagine your classmate says, “Environmental pollution is an unfortunate but necessary cost of living in a modern industrialized society.” Do you agree with this statement? Why or why not?

Possible Responses

- Students may agree that industrial production and living in a modern society means requires there to be at least some degree of pollution. That pollution could still be limited and regulated by government.
- Students may disagree and say that it is unfair or even immoral to allow one group to disproportionately suffer the effects of that pollution.
- Some students may say that scientists and politicians will find more ways to reduce pollution.

3. Use the Internet to find out about environmental pollution in your community, state, or region. What steps are people and organizations taking to solve this problem? Do people in different communities share the hazards and benefits equally?

Possible Responses

- Answers will vary depending on students’ location.
- Students may find evidence of cleanup efforts.
- Students may find evidence of legislation rollbacks or lax enforcement of environmental laws and regulations.
- Students may be able to pinpoint which communities benefit most or least by paying attention to the locations of polluted sites or cleanup efforts.

CHAPTER 19 Development and Trade

TOPIC 7.6 Trade and the World Economy

COVID-19 Map

Course Skill 4.F: Explain possible limitations of visual sources provided.

Essential Knowledge IMP-1.C.1: Geospatial and geographic data, including census data and satellite imagery, are used at all scales for personal, business and organizational, and governmental decision-making purposes.

Reproducible Page: See Teacher Resource page 161 for the map and questions.

Questions and Possible Responses

1. How does this map show interdependence? What are some ways this map could help scientists and public officials solve problems?

Possible Responses

- It shows that some crises, such as COVID-19, can cross borders rapidly and cause health concerns in many countries.
 - It could help them understand how widespread the virus is and which countries and regions have the most cases.
 - It could help them figure out how much money they should spend and where.
2. In addition to the extensive social impact of COVID-19, the economic effects were significant in many countries. Imagine that the International Monetary Fund or another international financial institution announced substantial funding for COVID-19 relief programs. Based on the map, what do you think is the fairest way to grant aid?

Possible Responses

- The IMF or other financial institutions should provide the most relief to countries with the highest number of cases/deaths of COVID-19 to help the many people suffering from the virus.
 - The IMF or other financial institutions should give relief to countries that have the least wealth and financial ability to help its population.
 - The IMF or other financial institutions should give relief to countries whose governments have the fewest regulations to protect its population from COVID-19 or have implemented the fewest measures to mitigate the virus.
3. You already know that a map is only as valuable as the data used to create it. What problems or limitations might there be with the data that researchers used to create this map? Use the Internet to research problems with collecting data about disease outbreaks.

Possible Responses

- Some countries might not have efficient or effective ways to collect accurate data on outbreaks.
 - Some countries might deliberately downplay the number of cases to give the impression to its citizens and the world at large that conditions are more under control than they actually are.
 - In countries that have relatively few outbreaks, there might be greater suffering if local hospitals and clinics lack effective treatments or enough bed space.
-

CHAPTER 20 Changing Global Economy and Sustainability

TOPIC 7.8 Sustainable Development

Deaths from Indoor Air Pollution

Course Skill 5.D: Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects across various geographic scales.

Essential Knowledge IMP-7.A.1: Sustainable development policies attempt to remedy problems stemming from natural resource depletion, mass consumption, the effects of pollution, and the impact of climate change.

Reproducible Page: See Teacher Resource page 163 for the excerpt, map, and questions.

Questions and Possible Responses

1. It can be difficult to compare pollution issues across countries and regions. Why do you think the table shows the number of pollution-related deaths per 100,000 people instead of the total number of pollution-related deaths in each country?

Possible Responses

- Showing the total number of deaths would most likely mean analyzing only the largest countries.
- A smaller country can have a severe and persistent pollution problem, even if it has fewer total deaths than a larger country.
- The analysts most likely wanted to examine the countries that had the most severe pollution, regardless of the size of the country.

2. According to the map, what trends exist related to deaths and indoor air pollution?

Possible Responses

- Less-developed countries struggle with pollution-related deaths the most.
- Deaths are most common in countries in Africa, South Asia, and Southeast Asia.
- Developed countries have lower shares of death related to indoor air pollution.

3. Use the Internet to find out about ways to reduce indoor air pollution in some of the world's poorest countries. What are people and organizations doing to help solve this problem?

Possible Responses

- Answers will vary depending on students' research results.
- Building chimneys and improving ventilation in homes are important ways to reduce indoor air pollution in some of the world's poorest countries.
- Encouraging people to quit smoking tobacco can also help.
- Using fuel-efficient, cleaner-burning cookstoves can significantly reduce indoor air pollution. Switching to gas or electric from coal or wood is beneficial but expensive.

JUSTICE AND RACE

Map Projections and Controversies

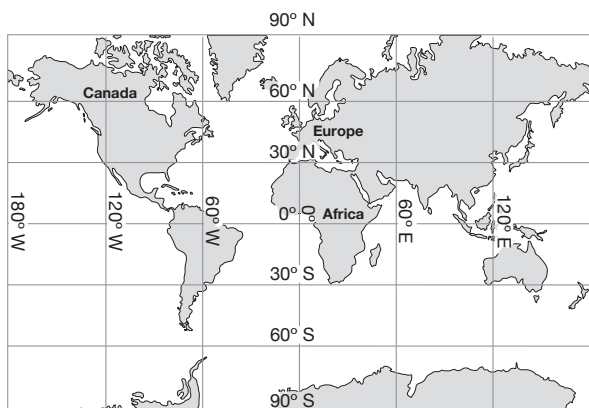
Topic 1.1 Introduction to Maps

In 2017, Boston Public Schools decided to stop buying world maps that use the Mercator projection and start buying ones that use the Peters projection.

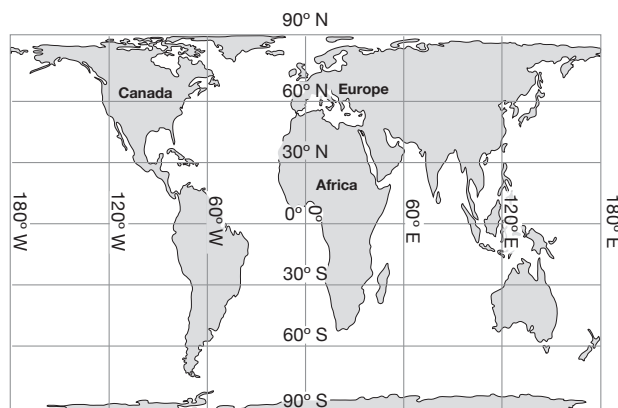
“... the classrooms have received a different projection [rather than a Mercator projection], the Peters, which stretches out the world in order to give each continent a proportionally accurate amount of room. On the Peters, Canada—so huge on the Mercator—shrinks to its proper size, while Africa, which the Mercator shows shrunk and jammed beneath a too-large Europe, stretches out.

“Boston Public Schools... serves a student population that is 74 percent Black and Latino... ‘We were primarily concerned with the notion of decolonizing our curriculum,’ says Hayden Frederick-Clarke, Director of Cultural Proficiency for the school district, and the person who decided to bring in the Peters. Schools across the country are working to combat the racism that often persists in older textbooks and other classroom materials. To Frederick-Clarke, introducing the Peters was an opportunity to address this imbalance—a first step in what, over the next three years, will become a much larger lift. ‘It’s a systems test, as well as a symbolic representation of what we’d like to do to our curricula writ large,’ he says.”

Source: Cara Giaimo, “Why Map Historians Are Annoyed with Boston Public Schools.” *Atlas Obscura*, March 29, 2017.



Mercator Projection



Peters Projection

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. Some experts have suggested that classrooms should use a variety of map projections. What would be benefits and challenges of such a suggestion?

2. Examine the map projections and the strengths and weaknesses of each. Notice the relative sizes of the areas mentioned in the excerpt (Africa, Canada, and Europe) on each map projection. Do you agree with Frederick-Clarke's opinion that the Mercator projection is imbalanced and that it reflects a (European) colonizer's view of the world? Why or why not?

3. Use the Internet to research how different countries represent the world in their maps. For example, look for world maps created by North Korea, Japan, or China. Then look for an azimuthal projection from the North Pole or the South Pole. How do these compare with maps created by Europeans or North Americans? How might a country's world map affect how it views its place in the world and other countries' places in the world?

JUSTICE AND RACE**Stereotypes and Non-Native Speakers****Topic 1.7** Regional Analysis

The accents of non-native speakers can convince people that those non-native speakers come from another region. This perception can lead to discrimination.

“Ultimately, it’s. . . stereotypes that shape what will happen when people hear foreign accents....

“Speakers with foreign accents can face discrimination even in a country with a diverse population and a long immigrant history. The U.S. Equal Employment Opportunity Commission (EEOC) is tasked with enforcing federal laws prohibiting employment discrimination and has settled several foreign-accent discrimination lawsuits since 2010. In the most recent of these lawsuits, [an] employee from Gambia, Ebrima Jallow, complained that the store manager had mocked his accent. (The manager also made anti-African and Islamophobic comments.) When Jallow complained, the manager threatened to fire him and told other employees not to work with him. The EEOC and [the store] settled for \$75,000.

“The United States is unique because it’s one of the few industrialized countries with legal mechanisms and institutions that can be used to protect the linguistic status of migrants. Another country with a long history of linguistic migration, Australia, has nothing similar. It is actually becoming less accommodating to speakers of other languages.”

Source: Michael Erard, “The Reason You Discriminate against Foreign Accents Starts with What They Do to Your Brain.” *Quartz*, Feb. 25, 2016.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. Based on what you learned in Topic 1.7, in what world region and subregion did Ebrima Jallow live before he moved to the United States?

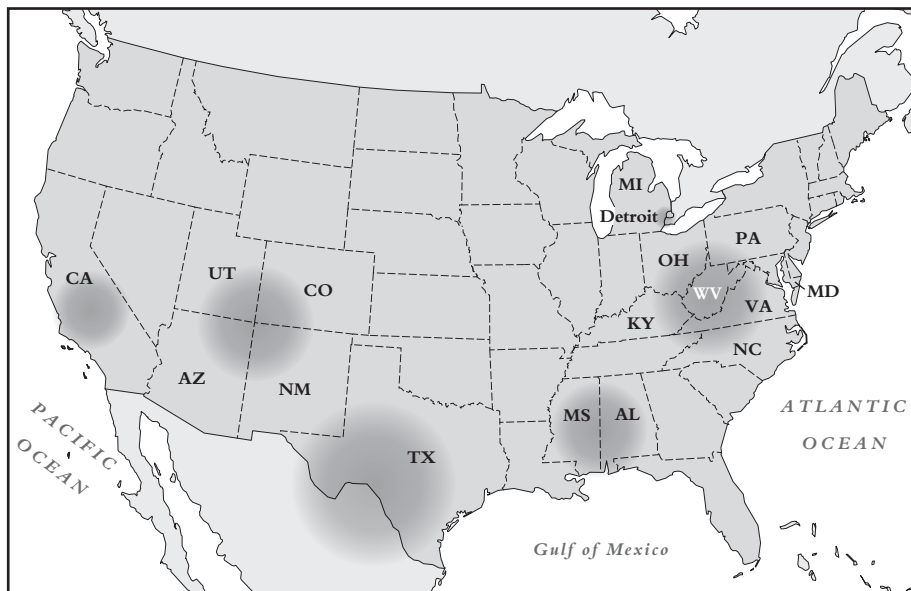
2. In Topic 1.7, you learned that nearly 80 percent of the people in the United States speak English at home, yet millions have a non-English primary language. What does this statistic and the article reveal about language in the United States and other countries?

3. Use the Internet to research Gambia, the country Jallow came from. What is the official language there? What other languages do people speak there? Why do you think Jallow's manager perceived him as belonging to another region based on his speech?

JUSTICE AND RACE**Access to Clean Drinking Water and Plumbing****Topic 2.2** Consequences of Population Distribution

Access to water is part of a community's infrastructure. However, clean water isn't always available to everyone, even in developed countries such as the United States.

"Our analysis of the American Community Survey found that race is the variable most strongly associated with access to complete plumbing. Nationwide, 0.3 percent of white households lack complete plumbing, as compared to 0.5 percent of African American and Latinx households and 5.8 percent of Native American households. That means that African American and Latinx households are nearly twice as likely to lack complete plumbing than white households, and Native American households are 19 times more likely. In fact, our analysis showed that the larger the share of Native American, African American, Latinx, or Pacific Islander residents living in a census tract, the higher the percentage of homes that lack complete plumbing."

AREAS LACKING ACCESS TO CLEAN WATER AND COMPLETE PLUMBING, 2019

Source: U.S. Water Alliance and Dig Deep, *Closing the Water Access Gap in the United States*, pp. 22, 28–29. 2019.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. People often assume infrastructure is equally accessible to everyone. How does the example of access to clean drinking water show that this is not always true?

2. You have learned the environment and human activities have significant effects on each other. What are some ways that having limited access or no access to clean drinking water might affect a person or a community? What do patterns on the map reveal about governments' role in ensuring access to safe drinking water?

3. Use the Internet to research access to clean drinking water in developing countries. What are people, groups, and governments doing to help solve this problem?

JUSTICE AND RACE**Malthusian Theory and Fertility Rates****Topic 2.6** Malthusian Theory

In the late 18th century, Thomas Malthus wrote of concerns that food production increases would not keep up with population growth, resulting in widespread starvation and other problems. His ideas, called Malthusian theory, have not proven to be true on a worldwide scale and have led to further debate about population and food production.

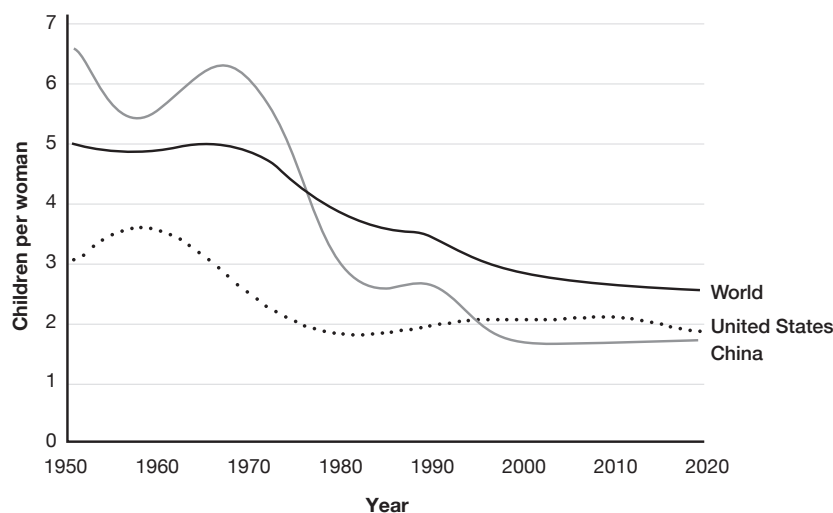
“The belief that ‘those in power knew best what was good for the vulnerable and weak’ led directly to legal actions based on questionable Malthusian science. For example, the English Poor Law implemented by Queen Elizabeth I in 1601 to provide food to the poor was severely curtailed by the Poor Law Amendment Act of 1834, based on Malthusian reasoning that helping the poor only encourages them to have more children and thereby exacerbates poverty. The British government had a similar Malthusian attitude during the Irish potato famine of the 1840s, [evolutionary biologist and journalist, Matt] Ridley notes, reasoning that famine, in the words of Assistant Secretary to the Treasury Charles Trevelyan, was an ‘effective mechanism for reducing surplus population’...

“We think of eugenics and forced sterilization as a right-wing Nazi program implemented in 1930s Germany. Yet...eugenics fever swept America in the early 20th century, culminating in the 1927 Supreme Court case *Buck v. Bell*, in which the justices legalized sterilization of ‘undesirable’ citizens....

“The problem with Malthusians, [author Ronald] Bailey writes, is that they ‘cannot let go of the simple but clearly wrong idea that human beings are no different from a herd of deer when it comes to reproduction.’ Humans are thinking animals. We find solutions—think Norman Borlaug and the Green Revolution. The result is the opposite of what Malthus predicted: the wealthiest nations with the greatest food security have the lowest fertility rates, whereas the most food-insecure countries have the highest fertility rates.

“The solution to overpopulation is not to force people to have fewer children. China’s One-child policy showed the futility of that experiment. It is to raise the poorest nations out of poverty through democratic governance, free trade, access to birth control, and the education and economic empowerment of women.”

Source: Michael Shermer, “Why Malthus Is Still Wrong.” *Scientific American*, May 1, 2016.

FERTILITY RATE SINCE 1950–2020

Source: Our World in Data

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. According to the excerpt, how did lawmakers, judges, and other powerful people use Malthusian theory to justify their beliefs?

2. Does the information in the graph support or contradict the ideas of Thomas Malthus? Explain. How does Malthusian theory apply to countries of different levels of development?

3. Use the Internet and Topic 5.5 to research Norman Borlaug and the Green Revolution. How has the Green Revolution affected global human population?

JUSTICE AND RACE

Geospatial Data on U.S. Lynchings

Topic 2.11 Forced and Voluntary Migration

Most people today think of forced and voluntary migrations as something that happens almost exclusively in developing countries, such as Myanmar and Syria. However, the United States has experienced forced and voluntary migrations internally. Researchers are studying the connections between lynching and migration in United States history.

A lynching happens when a mob illegally kills someone for a real or imagined crime. In the United States, mobs have lynched some Jewish people, but most U.S. victims of lynchings have been African American. The Equal Justice Initiative gathered geospatial data on lynchings in the United States.

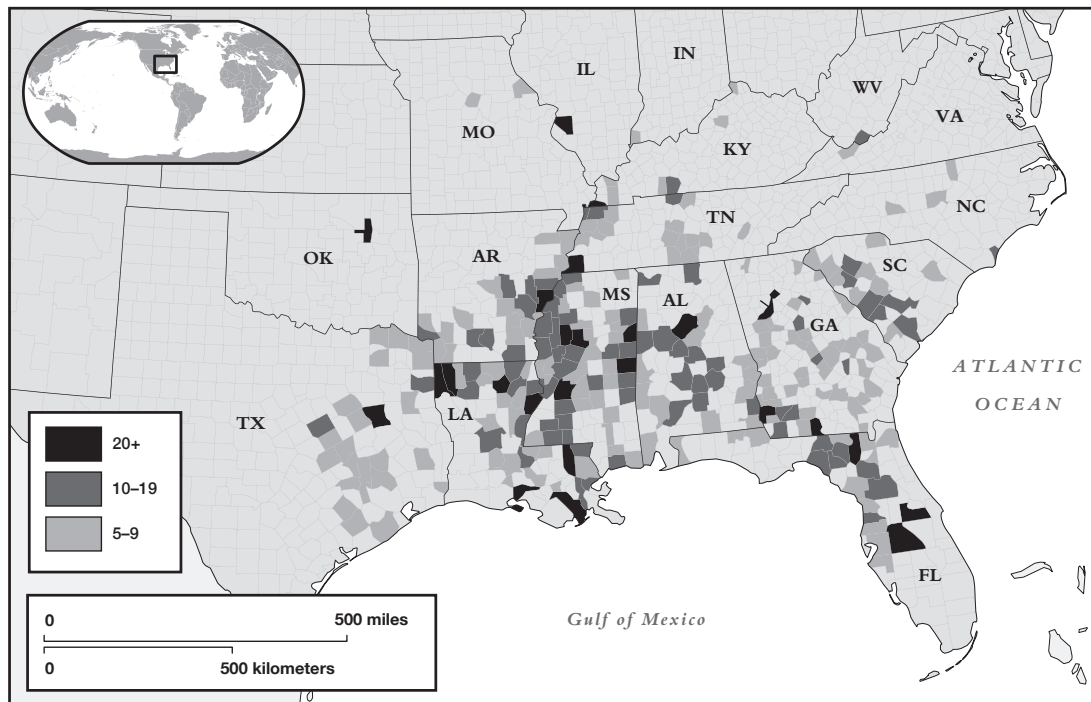
“On Tuesday, the organization [Bryan Stevenson] founded and runs, the Equal Justice Initiative in Montgomery, Ala., released a report on the history of lynchings in the United States, the result of five years of research and 160 visits to sites around the South. The authors of the report compiled an inventory of 3,959 victims of ‘racial terror lynchings’ in 12 Southern states from 1877 to 1950....

“The process is intended, Mr. Stevenson said, to force people to reckon with the narrative through-line of the country’s vicious racial history, rather than thinking of that history in a short-range, piecemeal way.

“‘Lynching and the terror era shaped the geography, politics, economics, and social characteristics of being Black in America during the 20th century,’ Mr. Stevenson said, arguing that many participants in the great migration from the South should be thought of as refugees fleeing terrorism rather than people simply seeking work.”

Source: Campbell Robertson, “History of Lynchings in the South Documents Nearly 4,000 Names.” *New York Times*, Feb. 10, 2015.

LYNCHINGS, 1877-1950



Source: Equal Justice Initiative, *Lynching in America, Confronting the Legacy of Racial Terror*, 2017.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. In what ways might geospatial data about lynchings in the United States be as useful as or more useful than information about individual lynchings at particular locations?

2. By the time Reconstruction ended in 1877, African Americans had equal protection of the law. Why did lynchings and other acts of terror continue until 1950 and beyond? What patterns are shown in the map about lynchings and acts of terror?

3. Use the Internet to research the Great Migration in the United States. Do the sources that you found describe it as the result of forced or voluntary migration? How does the geospatial information shown on this page help you understand the causes of the Great Migration?

JUSTICE AND RACE**A Mountain's Name in Different Languages: Denali and McKinley****Topic 3.2** Cultural Landscapes

North America's tallest mountain, Denali, is located in Alaska. Denali means "Great One" in Koyukon, a local Native American language. In 1896, a gold prospector suggested the name should be changed to Mount McKinley in honor of a presidential candidate from Ohio, William McKinley, who later became president. It was officially changed in 1917.

"I hope that in the bill you will call it 'Mt. Denali National Park' so that the true old ... name ... will thus be preserved."—hunter and naturalist Charles Sheldon, writing in 1916 to the commission in charge of naming the park

"I don't like the name of Denali. It is not descriptive. Everybody in the United States knows of Mt. McKinley and the various efforts made to climb it.... I think that the name McKinley should stick."

—answer from a commission member, 1916

Source: National Parks Service website, "Denali or Mt. McKinley?"

"President Obama's three-day trip to Alaska this week will literally change the map of the nation's 49th state. Mount McKinley ... has been renamed Denali, as it was originally known by Alaska Natives before it was renamed to honor President William McKinley....The White House said the name change 'recognizes the sacred status of Denali to generations of Alaska Natives.'"

Source: Gregory Korte, "Obama Administration Renames Mount McKinley to Denali,"
USA Today, August 30, 2015.

"President Obama wants to change the name of Mt. McKinley to Denali after more than 100 years. Great insult to Ohio. I will change back!"

Source: Presidential candidate Donald Trump, via Twitter, September 1, 2015.

"But Trump had one final issue on his mind. 'He looked at me and said, "I heard that the big mountain in Alaska also had—also its name was changed by executive action. Do you want us to reverse that?"' [Senator Dan] Sullivan (R-AK) said.

"'Lisa—Sen. Murkowski (R-AK)—and I jumped over the desk,' Sullivan said. 'We said no, no!'

"'The Alaska Native people named that mountain over 10,000 years ago,' Sullivan said."

Source: Dan Merica, "Trump asked about reversing Obama to rename Denali as Mount McKinley," CNN, October 25, 2017.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. How does the name of this mountain demonstrate the concept of cultural landscape?

2. Why do you think place names are sometimes controversial?

3. Use the Internet to research controversies related to Native American names. For example, look for information about names of tribes or sports teams. Why do you think some people care so passionately about what a group or place should be named?

JUSTICE AND RACE

Economics and Endangered Languages

Topic 3.5 Historical Causes of Diffusion

To facilitate communication between people who speak different languages, a lingua franca often is used. Globalization and technology have increased the use of English as the most common lingua franca. However, the increased use of English and other languages has had effects that some people consider negative.

“The world’s roughly 7,000 known languages are disappearing faster than species, with a different tongue dying approximately every 2 weeks. Now, by borrowing methods used in ecology to track endangered species, researchers have identified the primary threat to linguistic diversity: economic development. Though such growth has been shown to wipe out language in the past on a case-by-case basis, this is the first study to demonstrate that it is a global phenomenon, researchers say.

“Many people know about the threatened polar bear and extinct passenger pigeon, but few have heard of endangered and extinct languages such as Eyak in Alaska, whose last speaker died in 2008, or Ubykh in Turkey, whose last fluent speaker died in 1992, says Tatsuya Amano, a zoologist at the University of Cambridge in the United Kingdom and lead author of the new study. It’s well known that economic growth or the desire to achieve it can drive language loss, he notes—dominant languages such as Mandarin Chinese and English are often required for upward mobility in education and business, and economic assistance often encourages recipients to speak dominant languages. Whereas specific case studies demonstrate such forces at work, such as the transition from Cornish to English in the United Kingdom and from Horom to English in Nigeria, this is the first study to examine losses worldwide and rank economic growth alongside other possible influences, he says.”

Source: Emily Underwood, “Languages Are Being Wiped Out by Economic Growth.” *Science*, Sept. 2, 2014.

ALASKA'S NATIVE LANGUAGES



Source: Alaska's Native Language Center

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. Based on Topic 3.5 and the excerpt, why do you think Alaskan languages never diffused widely throughout the world?

2. Based on Topic 3.5 and the excerpt, why do you think economic factors are the primary cause of language loss? For a culture with a threatened language, are the economic benefits that accompany the adoption of a more widely used language justifiable?

3. Use the Internet to research language preservation. How are people using technology to keep rare languages alive?

JUSTICE AND RACE**Nigeria, Colonialism, and Independence Movements****Topic 4.2** Political Processes

The legacy of colonialism in Africa has been one of division and conflict. The boundaries drawn by European leaders at the 1885 Berlin Conference did not consider the existing cultural and political differences of the people of the continent. The result has been many wars and conflicts in Africa over nearly the last century and a half. Conflicts in Nigeria since the mid-20th century are an example of this legacy.

“Nigeria has existed in its present form since the early 20th century when the British amalgamated its northern and southern protectorates in 1914 to form a single country. Unification brought together a wide variety of ethnic groups; Nigeria is home to more than 200 ethnicities and tribes. The three main ethnic groups—Hausa-Fulani, Yoruba, and Igbo—are concentrated in the north, west, and southeast of the country, respectively.

“Nigeria spent another 46 years under British rule before gaining its independence in 1960. Its first prime minister, Sir Abubakar Tafawa Balewa, was a Hausa from the north. Balewa was killed in a military coup in 1966, led by Igbo generals. It was the first of many coups and power grabs that have blighted Nigeria’s history: the country did not witness a peaceful transfer of power until the 2015 election of President Muhammadu Buhari.”

Source: Conor Gaffey, “Why Is Nigeria One Country, and Who Wants to Divide It?” *Newsweek*, June 24, 2017.

ETHNIC GROUPS OF NIGERIA**Responding to the Information**

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. What motivations did the British have to create the borders of Nigeria where they did? How did the British and other European powers justify their division of Africa?

2. What challenges do you think countries with many ethnicities face politically and socially?

3. Use the Internet to research an independence movement. For instance, you might choose Quebec, South Sudan, or Biafra. Did the independence movement result in a new country?

JUSTICE AND RACE**Bolivia, Chile, and Coastal Access****Topic 4.5** The Function of Political Boundaries

A land dispute caused the War of the Pacific between Bolivia and Chile in the late 19th century. Subsequent treaties awarded Chile the entire Bolivian coast, including provinces with mineral resources. In July 2016, a dispute over access to the coast led to other accusations.

“Bolivia accused Chile of racism. . . in a dispute over treatment of [Bolivia’s] foreign minister, who is an Aymara Indian. That minister, David Choquehuanca, will leave Sunday for a four-day visit to Chile during which he will visit two ports on the Pacific.

“Bolivian truck drivers have complained they are mistreated at those ports, being forced to make under-the-table payments and denied access to some trucking facilities. They say they are also treated disrespectfully. Choquehuanca wants to inspect the ports. . . Arica and Antofagasta. Chilean Foreign Minister Hernando Muñoz said Monday that he can certainly go to the ports but will be recognized not as foreign minister but rather as ‘a tourist.’

“Bolivian President Evo Morales, who is also Aymara, blasted Chile on his Twitter account Tuesday. The warning that Chile will receive the minister as a mere visitor at the ports ‘is the most damning proof of the neocolonial racism that reigns in Chile and which will not recognize an indigenous foreign minister,’ Morales said.

“Modern-day Bolivia is landlocked, but its territory used to stretch west to the ocean. It lost that land, which included 400 kilometers (250 miles) of coastline, in a war with Chile in the late 19th century. Under a 1904 peace treaty, Bolivia is supposed to have free access by land to Arica and Antofagasta. . .

“Bolivia filed suit against Chile in The Hague [location of the International Court of Justice] in 2013 to try to regain access to the Pacific. [The Court ruled that Chile does not have to negotiate over Bolivian access to the coast.] Since the late 1970s, Bolivia and Chile have not even had full diplomatic relations.”

Source: Agence France-Presse, “Bolivia Accuses Chile of Racist Treatment of FM [Foreign Minister].” *Yahoo! Finance*, July 12, 2016. (Reformatted for print.)

BOLIVIA'S ACCESS TO THE PACIFIC OCEAN

Source: Wikimedia Commons.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. How does this incident show the challenges of living in a landlocked country?

2. Based on the map and excerpt, do you agree with the claim made by the Bolivian president that Chile's actions showed "neocolonial racism"? Explain your answer.

3. Use the Internet to research another landlocked country. For instance, you might choose Botswana, Mongolia, or Moldova. What challenges has that country faced because it is landlocked?

JUSTICE AND RACE**Ethnic Cleansing of Uyghur Muslims****Topic 4.8** Defining Devolutionary Factors

There are about 12 million, mostly Muslim, Uyghurs living in the Xinjiang region of China. The Uyghurs [Uighurs] are an ethnic and religious minority.

“China’s ethnic cleansing of Uyghur Muslims is a human rights catastrophe that we should be paying closer attention to. More than one million Uyghur Muslims in China’s north-western Xinjiang province are being systemically targeted, tortured, and arbitrarily detained. Their only crime is being Muslim. This is not something we should turn a blind eye to, nor should China escape justice. We must begin with ending impunity for the horrific human rights violations that are occurring right before us and do everything we can to hold China accountable.

“Uyghur Muslims are one of the 56 ethnic groups officially recognized by the Chinese government. The Uyghur community in China is a large percentage of the Xinjiang province, an officially autonomous region, where they make up 45 [percent] of the population.

“They are being persecuted in ‘re-education camps,’ where they are forced to abandon their religion and language. Men, women, and children are forced to renounce Islam, sing praises for the Chinese Communist Party and learn Mandarin. The Chinese government is coercing Uyghur women to take birth control as part of a campaign to curb its Muslim population. Women have shared harrowing stories of sexual abuse with some saying they were forced to undergo abortions or have contraceptive devices implanted against their will.”

Source: Aisha Ditta, “Why We Cannot Ignore China’s Ethnic Cleansing,”
International Observatory Human Rights, November 17, 2020.

CHINA’S XINJIANG REGION

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. What responsibilities do international organizations and other countries have to get involved when these types of internal devolutionary crises occur?

2. Based on the map and what you read in Chapter 10, what challenges might the Uyghurs face if they seek independence from China?

3. Use the Internet to research what companies that have economic ties to China have done to address these alleged human rights abuses.

JUSTICE AND RACE

Black Americans and Farming

Topic 5.1 Introduction to Agriculture

“‘There are easier ways to make a living than farming,’ Greg Bridgeforth said as he drove a combine through fields he farms in northern Alabama. ‘But this is what I truly love to do—till the soil and grow things, just like my father, grandfather, and great-grandfather did. You know, when problems get you down, you go out in the field and have time to think it through.’

“The farm was started in the 1870s by George Bridgeforth, Greg’s great-grandfather, who had been born into slavery. The family has survived droughts, tornadoes, and the boll weevil during the century and a half that successive generations have been farming.

“The Bridgeforths of Limestone County held on as a vast majority of the nation’s black farmers lost their land and livelihood, mostly because of systematic racism. Federal loans were denied or delayed, and black farmers were often shortchanged or shunned by local banks and businesses as white farmers angled to take over the fields. Those forces, along with the racial terror spread by the Ku Klux Klan, helped drive the Great Migration.

“Billy and Greg Bridgeforth are determined to help other black farmers keep their land and expand their businesses by spreading modern farming and management techniques. They are actively involved in the National Black Growers Council, a group aiming to improve agricultural efficiency and productivity.”

Source: James Estrin, “Surviving Droughts, Tornadoes, and Racism.” *New York Times*, Nov. 6, 2019.

U.S. FARMS WITH BLACK OR AFRICAN AMERICAN OPERATORS, 2012

Characteristic	Quantity
Primary occupation:	
Farming	21,182
Other	25,400
Years on present farm:	
2 or fewer years	2,174
3–4 years	2,993
5–9 years	7,404
10 or more years	34,011
Age groups:	
34 or younger	2,255
35–44 years	3,525
45–64 years	23,377
65 years or older	17,425
Average age	59.9

Source: Census of Agriculture, National Agriculture Statistics Service, U.S. Department of Agriculture.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. Based on the article, what factors have affected the ability of African American farmers, like members of the Bridgeforth family, to own land and farm?

2. Based on the information in the table, what conclusions can you draw about younger Black Americans and farming?

3. Use the Internet to research the number of Black farmers in America. How has the number changed? What might account for the differences over time?

JUSTICE AND RACE

Technology, Capital, and Farming in Developing Countries

Topic 5.5 The Green Revolution

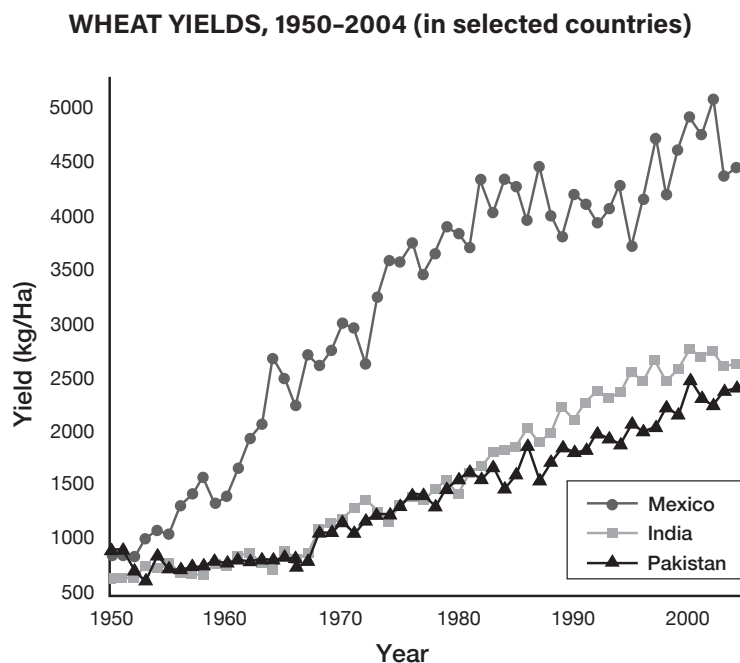
In this interview excerpt, an expert reflects on the economic impacts of Norman Borlaug's work to develop new agricultural technologies to grow more and better crops during the Green Revolution.

"[Borlaug] was using the knowledge of what was known at the time about breeding for crop improvements—this is in the 1940s and '50s and '60s—to try to create these new varieties. . . .

"There were some other things that were happening that don't get talked about quite as much. Borlaug was very committed in his early years to working with very poor farmers in Mexico and really trying to create a crop and a product that would improve their livelihoods and reduce malnutrition and generate disposable income for those families. As time went on, however, one of the peculiar effects of this was that because you had to purchase inputs, and because you had to have access to water, to some degree it became the case that in many parts of the world only the more capitalized farmers can actually get access to the money needed to buy the fertilizer, or buy the pesticides or herbicides, and also have access to water. So to some degree you've got consolidation in the agricultural sector, and instead of actually necessarily helping small farmers in certain instances, more in Latin America than in Asia, you ended up displacing the small farmers that Borlaug had intended to help. So those were other socioeconomic and political implications to the technology that were not foreseen when Borlaug, I think with the best of intentions, was breeding for these new varieties to help these small farmers.

"From there a larger critique began to emerge about the Green Revolution itself, its intentions, and whether the productivity increases that it had proposed should be viewed alone or whether you needed to take into account these environmental and social and political and economic factors."

Source: "The Green Revolution: Norman Borlaug and the Race to Fight Global Hunger."
PBS *American Experience*, April 3, 2020.



Source: United Nations Food and Agriculture Organization.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. How successful was the Green Revolution in Mexico? Support your opinion with information from the excerpt, graph, and Topic 5.5.

2. How did access to capital affect the degree of success Mexican farmers had during the Green Revolution?

3. Use the Internet to research subsistence farming in another part of the world besides Mexico. In what ways (if any) has technology changed this type of farming?

JUSTICE AND RACE

Where Do Our Flowers Grow? Why Do They Grow There?

Topic 5.8 Von Thünen Model

“Most Americans might not know it, but the vast majority of the cut flowers sold throughout the country are grown and exported out of Colombia. While the cut flower industry has aided Colombia in expanding its economy, increasing non-drug-related exports, and [increasing] overall international trade, there is a dark side to the growing of flowers—large human and environmental costs. The growing practices in the cut flower industry utilize many highly toxic chemicals that harm both the workers and the surrounding environment. Additionally, the farms themselves are riddled with labor abuses, toxic waste, and overuse of local water and energy sources. To combat these pressing issues in the billion-dollar cut flower industry, steps need to be taken in the form of a push by consumers and stores for a safe flower certification system to combat these issues. With more stores selling and publicizing flowers that have been certified, the issue will gain attention, and more stores and buyers will feel the pressure to follow suit.”

Source: Lydia Gulick, “Every Rose Has its Thorn: Exposing Colombia’s Cut Flower Industry.” *Brown Political Review*, July 23, 2019.

COUNTRIES BY VOLUME OF CUT FLOWERS PRODUCED, 2018

Rank	Country	% of Global Production
1	The Netherlands	52
2	Colombia	15
3	Ecuador	9
4	Kenya	7
5	Belgium	3
6	Ethiopia	2
7	Malaysia	1
8	Italy	1
9	Germany	1
10	Israel	1

Source: PetalRepublic.com.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. Today, more than 80 percent of cut flowers purchased in the United States are grown in other countries. Is this consistent with von Thünen's model? Explain how recent changes in growing flowers affects where they are produced.

2. According to the excerpt, what potential social or environmental concerns are associated with the cut-flower industry? Which of the countries in the table might have the most difficulties addressing those concerns? Explain your answer.

3. Use the table above and the Internet to research one of the top producers of cut flowers other than Colombia. How has the von Thünen model affected where farmers grow this crop?

JUSTICE AND RACE

Gender Inequalities in Farming

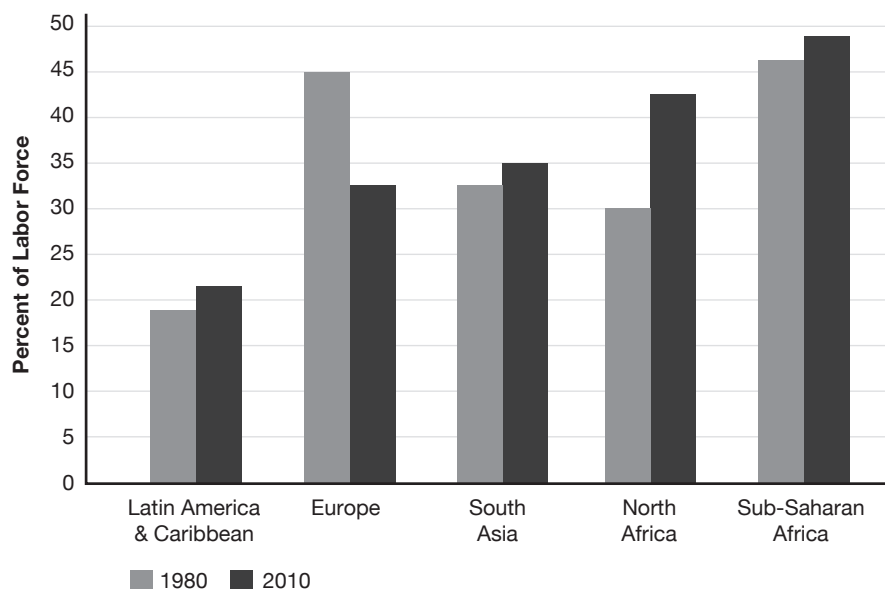
Topic 5.12 Women in Agriculture

“Women’s economic empowerment is a necessary step to promote women’s rights and achieve gender equality. Throughout the last decades, women have been entering the labor market and, despite the still existing inequalities in terms of wages and opportunities, there are many sectors in which women have achieved great visibility. This is not the case of agriculture and livestock. Currently, women working in rural areas must face a double burden, one linked to the fact of being a woman and one linked to the difficulties of life in the countryside. This is why it is essential to integrate the gender mainstreaming in the national and European agriculture policies.

“When more women work, economies grow. ‘Women’s economic empowerment boosts productivity, increases economic diversification and income equality in addition to other positive development outcomes,’ states a publication of United Nations Women, which also points out that conversely, it is estimated that gender gaps cost the economy some 15 percent of GDP [gross domestic product is the dollar amount of all goods produced by a country in a year]. The same applies to the rural sector. A third of women’s employment globally is in agriculture and, yet, women farmers have significantly less access to, control over, and ownership of land compared to their male counterparts. According to the Food and Agriculture Organization (FAO) of the United Nations, women represent 12.8 percent of the world’s agricultural landholders.”

Source: Ana Garcia Valdivia, “The Challenging Life of Female Farmers: Why a Gender Mainstreaming Is Necessary in Agriculture.” *Forbes*, Mar. 18, 2019.

PERCENT OF FEMALES IN THE AGRICULTURAL LABOR FORCE, 2011



Source: United Nations Food and Agriculture Organization.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. According to the excerpt, 12.8 percent of the world's agricultural landowners are women. What factors might explain why that percentage is lower than that of women in the agricultural labor force?

2. According to the bar graph, what are patterns in the data about women in the agricultural labor force? What factors might explain the changes over time and across different locations in these patterns?

3. Use the Internet to research farming and gender inequality. What steps are some groups and countries taking to try to solve this problem?

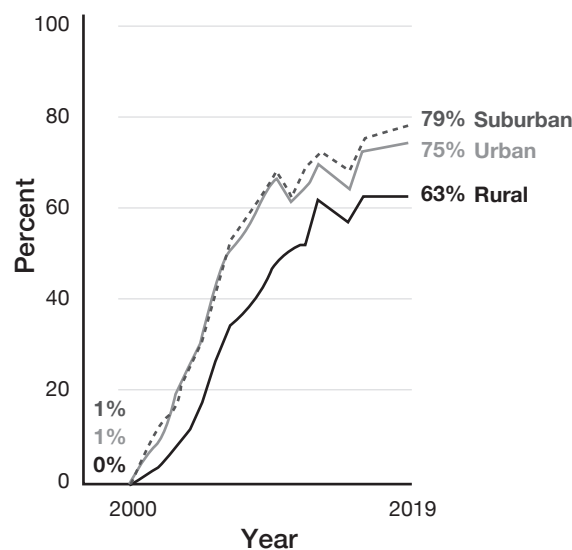
JUSTICE AND RACE**Digital Divides****Topic 6.1** The Origin and Influence of Urbanization

“While mainstream Internet use has come to influence almost every facet of life in the United States and across the globe, not all communities have been exposed to its resources at the same rates.

“According to 2015 U.S. Census Bureau data, 73% of U.S. homes had home-Internet access. However, examined by demographic groups, rates of home-Internet accessibility show significant disparities based on economic status and race. Just less than half of households with annual family incomes less than \$20,000 have home-Internet access. Further, 83% of Asians and 81% of Whites have home-Internet access, compared to 72% of American Indian/Alaska Natives, 70% of Hispanics, [and] 68% of Blacks. Largely a product of America’s overall racial wealth gap, the ‘digital divide’ is a term that has come to describe the racial and economic disparities seen in Internet access for Americans. Basic Internet access and efficient Internet speed are salient [important] factors in a person’s ability to utilize resources effectively. Lack of broadband high-speed Internet availability has been found to negatively impact a community’s ‘economic well-being,’ based on measures like growth of business, jobs, and population. A recent study found that counties which have large African American and Native American populations tend to have lower access to high-speed broadband connection, while the opposite tends to be true for counties with substantial White populations.

“The digital divide affects the resilience of American society in a multitude of ways, including the intersection of social cohesion and economic opportunity. Gaps in the availability of such a crucial and impactful resource will further increase existing inequities in already vulnerable neighborhoods and counties. Clear differences in access to opportunity can build upon pre-existing stigma and create a cycle of distrust and economic stagnation.”

Source: Lauren Rothschild. “U.S. ‘Digital Divide’: How Internet Access Disparities Affect Resilience.”
Global Resilience Institute at Northeastern University.

PERCENT OF AMERICANS WHO HAVE INTERNET ACCESSIBILITY, 2019

Source: Pew Research Center, 2019

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. In what way are the excerpt and the graphs describing the same problem? In what ways are they describing different problems?

2. Consider the impact of communication networks on people of various ethnicities and who live in different areas. What might be some effects if all people had access to reliable, high-speed Internet?

3. Use the Internet to research the digital divide in other parts of the world. Check the dates of the sources you find, and focus on the most recent ones. What steps are some groups and governments taking to solve this problem?

JUSTICE AND RACE

Zoning and Inequalities

Topic 6.5 The Internal Structure of Cities

Nearly all cities around the world are divided into three zones— central business district, industrial zone, and residential zone. While each zone has a distinct purpose to allow cities to function, issues can arise regarding zoning laws and practices.

“Homeownership is the main driver of wealth for most middle-class Americans, with homeowners’ median net worth a whopping 80 times larger than that of renters, according to the U.S. Census Bureau. . . .

“When cities first created neighborhoods where only single-family houses were allowed, it was about more than separating homes from apartments; it was about separating White families from everyone else. . . . Single-family zoning makes it illegal for a community to build anything other than a single home on a single lot. That means no apartment buildings, condos or duplexes. . . .

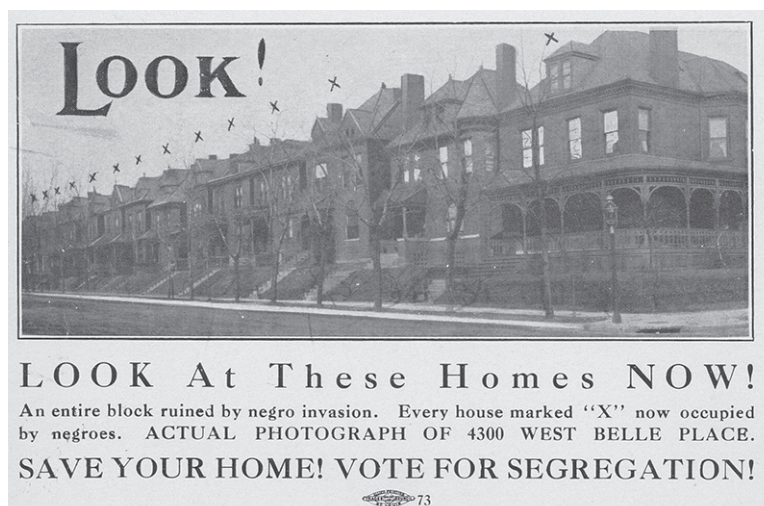
“A *New York Times* analysis found that about 75% of the residential land in major cities across the country is devoted exclusively to single-family homes. . . . [and] as you increase the percentage of single-family zoning in a city, you increase the percentage of White residents.

“Part of that is because renting an apartment or duplex is less expensive than renting or buying a home. It’s also a legacy of racist housing policies, like redlining, that barred Black families from receiving federally backed loans following the Great Depression and from the GI Bill after World War II.

“Policies like these were later outlawed, but they still persist in practice, with lenders often charging higher interest rates or refusing home loans to Black buyers. Taken together, it’s helped drive a huge wealth gap between White and Black families, with White families having an average \$188,200 in wealth, compared to \$24,100 for Black families. That makes it harder for Black families to purchase homes in single-family neighborhoods.

“Minneapolis city officials voted in 2019 to ban single-family zoning. That doesn’t mean it’s illegal to build a single-family home. It means it is legal to build things like duplexes or triplexes in most of the city where only single-family homes had been allowed before.”

Source: Erin Baldassari and Molly Solomon. “The Racist History of Single-Family Home Zoning.” KQED. October 5, 2020.



Source: Missouri History Museum

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. Do you agree with the authors of the excerpt that zoning laws exhibit racism? Why do zoning laws continue to exist today?

2. How have zoning laws led to short-term and long-term problems for communities?

3. Use the Internet to find out whether your community has zoning laws. What restrictions, if any, are in place? What are the benefits and potential drawbacks of these restrictions?

JUSTICE AND RACE**Neighborhood Studies of Life Expectancy****Topic 6.9 Urban Data**

In addition to economic impacts, segregation and housing discrimination can have severe social effects. Researchers have discovered significant variation in life expectancy among residents of different neighborhoods.

“Just to the west of downtown St. Paul, Minnesota, lies one of the worst-off neighborhoods in the state. The neighborhood, which is in the eastern part of St. Paul’s Rondo area, has a life expectancy estimate of about 65 years. . . . Almost 50% are Black, 13% are Asian, and 12% Hispanic, with the rest White or multiracial. . . .

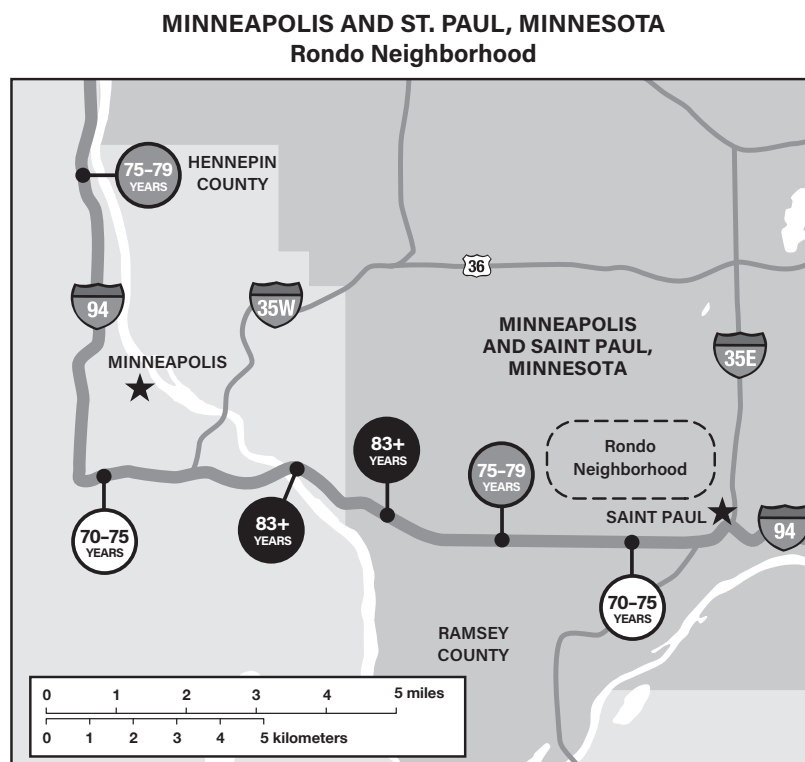
“But walk for just 15 minutes southeast over the I-94 highway, and you are in a very different world. In the southern part of the Historic Hill neighborhood, filled with massive Victorian houses. . . [e]ighty-five percent of the area’s almost 3,000 residents are White. The life expectancy is 86. . . .

“The neighborhoods differed, but they both once shared close-knit communities, according to the geographer Bill Lindeke, a specialist in the history of Minneapolis-St. Paul. Although [Rondo area’s] Cornmeal Valley was poor, it was an area rich with institutions, like churches, social centers, and clubs.

“Then came the highway. . . .

“The construction of I-94 is a rupture in the area’s history, Lindeke told *Quartz*. In order to make room for the highway, the city bulldozed homes in Cornmeal Valley, and many of the people who were displaced never returned. Those who did stay faced a noisier, more polluted area that was separated from the wealthier southern part of the city”

Source: Dan Kopf and Daniel Wolfe. “Map: What Story Does Your Neighborhood’s Life Expectancy Tell?” *Quartz*. December 12, 2018.



Source: Robert Wood Johnson Foundation

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. What information would researchers have missed if they had studied only the life expectancy of the entire city of St. Paul rather than St. Paul's neighborhoods in particular?

2. Other than a lower life expectancy, what data would you expect to see for the Rondo neighborhood compared to other neighborhoods in St. Paul?

3. Use the Internet to research life expectancy in different countries. Do you think local-level communities' life expectancies would be different than the national scale data? Why or why not?

JUSTICE AND RACE

Racial Disparities in Exposure to Pollution

Topic 7.1 The Industrial Revolution

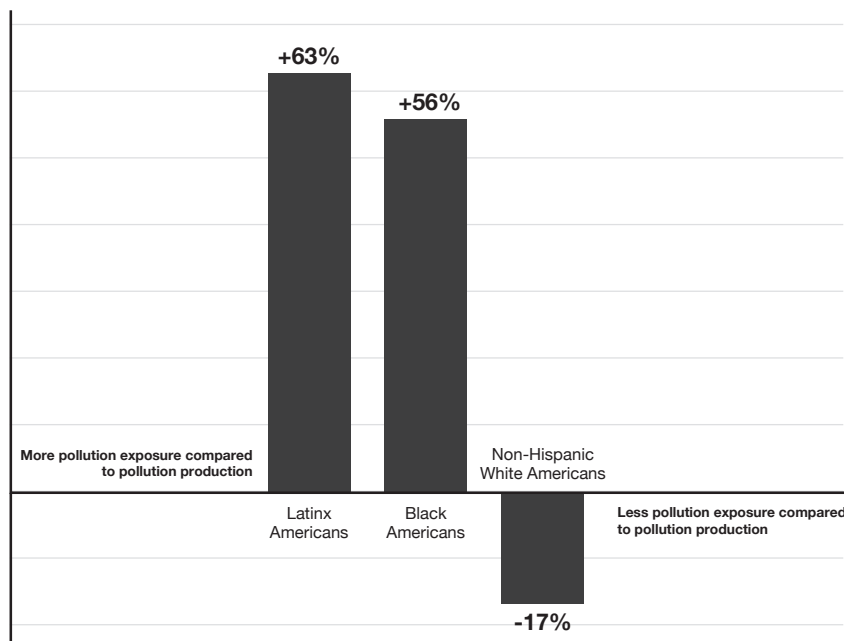
“When my book on environmental racism came out last year, one of the most common questions I received concerned alternative explanations for the greater ill health of minority ethnic groups. Surely, I was asked, the issue is not race, but poverty?

“Poverty is a risk factor for becoming unwell. But racial disparities in exposure to environmental pollutants are greater factors that remain even after controlling for income. African Americans who earn US\$50,000–60,000 annually—solidly middle class—are exposed to much higher levels of industrial chemicals, air pollution and poisonous heavy metals, as well as pathogens, than are profoundly poor White people with annual incomes of \$10,000. The disparity exists across both urban and rural areas.

“We need to take a longer, harder look at environmental racism—systems that produce and perpetuate inequalities in exposure to environmental pollutants. These can persist even in the absence of malevolent actors. The main culprits include indifference and ignorance, inadequate testing of industrial chemicals, racism, housing discrimination, corporate greed and lax legislation from, in the United States, a weakened Environmental Protection Agency. To combat these, society must actively take responsibility. By anticipating the outsized environmental assaults that people of color face, we can act to protect lives during the current pandemic and future outbreaks.”

Source: Harriet A. Washington. “How Environmental Racism is Fueling the Coronavirus Pandemic.” *Nature*. May 19, 2020.

EXPOSURE TO POLLUTION IN THE UNITED STATES, 2003–2015



Source: Christopher W. Tessum et al. “Inequity in Consumption of Goods and Services Adds to Racial-Ethnic Disparities in Air Pollution Exposure.” *Proceedings of the National Academy of Sciences*. March 2019.

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. In Topic 7.1 you read about deindustrialization. How might this process affect environmental racism in developed countries, such as the United States, and in developing countries?

2. Imagine your classmate says, “Environmental pollution is an unfortunate but necessary cost of living in a modern industrialized society.” Do you agree with this statement? Why or why not?

3. Use the Internet to find out about environmental pollution in your community, state, or region. What steps are people and organizations taking to solve this problem? Do people in different communities share the hazards and benefits equally?

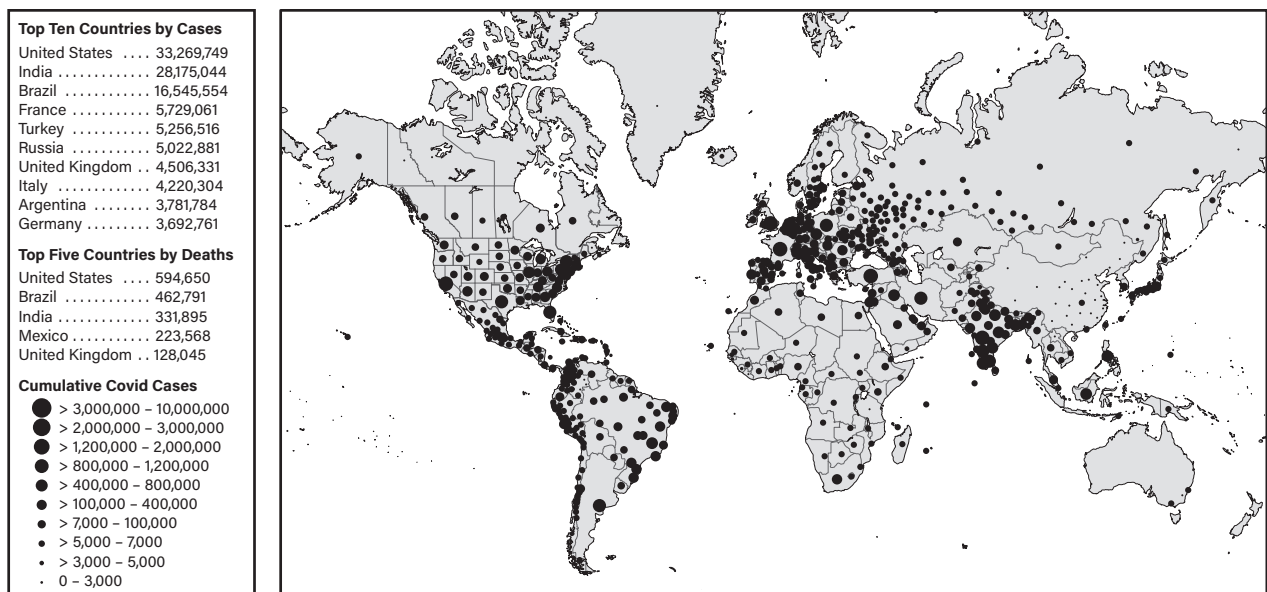
JUSTICE AND RACE

COVID-19 Map

Topic 7.6 Trade and the World Economy

Johns Hopkins University created and maintained maps and tables related to the worldwide spread of COVID-19. Geographic data such as this map helped lawmakers, international organizations, and charitable groups decide where and how much to spend on COVID-19 relief programs in different countries and regions.

GLOBAL COVID-19 CASES



Source: Johns Hopkins University of Medicine Coronavirus Resource Center

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. How does this map show interdependence? What are some ways this map could help scientists and public officials solve problems?

2. In addition to the extensive social impact of COVID-19, the economic effects were significant in many countries. Imagine that the International Monetary Fund or another international financial institution announced substantial funding for COVID-19 relief programs. Based on the map, what do you think is the fairest way to grant aid? Some factors to consider:

- the total number of COVID-19 *cases* within each country
- the total number of COVID-19 *deaths* within each country
- the wealth and other resources each country has to fight COVID-19

3. You already know that a map is only as valuable as the data used to create it. What problems or limitations might there be with the data that researchers used to create this map? Use the Internet to research problems with collecting data about disease outbreaks.

JUSTICE AND RACE

Deaths from Indoor Air Pollution

Topic 7.8 Sustainable Development

“Indoor air pollution is caused by burning solid fuel sources. . . for cooking and heating. . . .

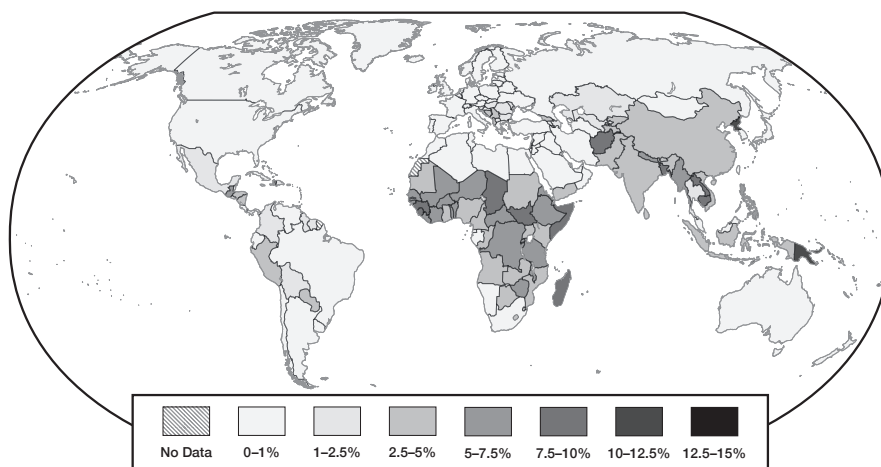
“Indoor air pollution is one of the world’s largest environmental problems—particularly for the poorest in the world who often do not have access to clean fuels for cooking....

“Indoor air pollution is a risk factor for several of the world’s leading causes of death, including heart disease, pneumonia, stroke, diabetes and lung cancer....

“According to the *Global Burden of Disease* study 1.6 million people died prematurely in 2017 as a result of indoor air pollution. To put this into context: this was four times the number of homicides—close to 400,000 in 2017.”

Source: Hannah Ritchie and Max Roser. “Indoor Air Pollution Is the Leading Risk Factor for Premature Death in Poor Countries.” *Our World in Data*. Published Nov. 2014; revised Nov. 2019.

SHARE OF DEATHS FROM INDOOR AIR POLLUTION, 2017



Source: Our World in Data

Responding to the Information

Write your thoughts to questions 1 and 2 on the lines provided. You will discuss questions 1 and 2 with your classmates. Research question 3. Record your research on the lines provided.

1. It can be difficult to compare pollution issues across countries and regions. Why do you think the table shows the number of pollution-related deaths per 100,000 people instead of the total number of pollution-related deaths in each country?

2. According to the map, what trends exist related to deaths and indoor air pollution?

3. Use the Internet to find out about ways to reduce indoor air pollution in some of the world's poorest countries. What are people and organizations doing to help solve this problem?

Correlation to the AP[®] Human Geography Course and Exam Description (effective Fall 2020)

Correlation to the Course Content

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 1: Thinking Geographically	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.		
	Enduring Understanding IMP-1: Geographers use maps and data to depict relationships of time, space, and scale.		
	Topic 1.1: Introduction to Maps	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		IMP-1.A— Identify types of maps, the types of information presented in maps, and different kinds of spatial patterns and relationships portrayed in maps.	
		IMP-1.A.1— Types of maps include reference maps and thematic maps.	pp. 9–11
		IMP-1.A.2— Types of spatial patterns represented on maps include absolute and relative distance and direction, clustering, dispersal, and elevation.	pp. 12–15
		IMP-1.A.3— All maps are selective in information; map projections inevitably distort spatial relationships in shape, area, distance, and direction.	pp. 15–16
	Topic 1.2: Geographic Data	IMP-1.B— Identify different methods of geographic data collection.	
		IMP-1.B.1— Data may be gathered in the field by organizations or by individuals.	pp. 18, 20
		IMP-1.B.2— Geospatial technologies include geographic information systems (GIS), satellite navigation systems, remote sensing, and online mapping and visualization.	pp. 18–19
		IMP-1.B.3— Spatial information can come from written accounts in the form of field observations, media reports, travel narratives, policy documents, personal interviews, landscape analysis, and photographic interpretation.	pp. 19–20
	Topic 1.3: The Power of Geographic Data	IMP-1.C— Explain the geographical effects of decisions made using geographical information.	
		IMP-1.C.1— Geospatial and geographical data, including census data and satellite imagery, are used at all scales for personal, business and organizational, and governmental decision-making purposes.	pp. 21–22
Unit 1: Thinking Geographically	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	Enduring Understanding PSO-1: Define major geographic concepts that illustrate spatial relationships.		
	Topic 1.4: Spatial Concepts	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		PSO-1.A — Define major Geographic concepts that illustrate spatial relationships	
		PSO-1.A.1— Spatial concepts include absolute and relative location, space, place, flows, distance decay, time-space compression, and pattern.	pp. 31–33
	Topic 1.5: Human-Environmental Interaction	PSO-1.B— Explain how major geographic concepts illustrate spatial relationships.	
		PSO-1.B.1— Concepts of nature and society include sustainability, natural resources, and land use.	pp. 35–36
		PSO-1.B.2— Theories regarding the interaction of the natural environment with human societies have evolved from environmental determinism to possibilism.	pp. 36–37
	Topic 1.6: Scales of Analysis	PSO-1.C— Define scales of analysis used by geographers.	
		PSO-1.C.1— Scales of analysis include global, regional, national, and local.	p. 38
		PSO-1.D— Explain what scales of analysis reveal.	
		PSO-1.D.1— Patterns and processes at different scales reveal variations in, and different interpretations of data.	pp. 39–40

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 1: Thinking Geographically	Spatial Process and Societal Change (SPS): A spatial perspective allows for a focus on the ways phenomena are related to one another in particular places, which in turn allows for the examination of human organization and its environmental consequences.		
	Enduring Understanding SPS-1: Geographers analyze complex issues and relationships with a distinctively spatial perspective.		
	Topic 1.7: Regional Analysis	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-1.A— Describe different ways that geographers define regions.	
		SPS-1.A.1— Regions are defined on the basis of one or more unifying characteristics or on patterns of activity.	pp. 43–45
		SPS-1.A.2— Types of regions include formal, functional, and perceptual/ vernacular.	pp. 43–44
		SPS-1.A.3— Regional boundaries are transitional and often contested and overlapping.	p. 46
		SPS-1.A.4— Geographers apply regional analysis at local, national, and global scales.	pp. 43–46
Unit 2: Population and Migration Patterns and Processes	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	Understanding PSO-2: Understanding where and how people live is essential to understanding global cultural, political, and economic patterns.		
	Topic 2.1: Population Distribution	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		PSO-2.A— Identify the factors that influence the distribution of human populations at different scales.	
		PSO-2.A.1— Physical factors (e.g., climate, landforms, water bodies) and human factors (e.g., culture, economics, history, politics) influence the distribution of population.	pp. 55–57
		PSO-2.A.2— Factors that illustrate patterns of population distribution vary according to the scale of analysis.	p. 57
		PSO-2.B— Define methods geographers use to calculate population density.	
		PSO-2.B.1— The three methods for calculating population density are arithmetic, physiological, and agricultural.	pp. 58–59
		PSO-2.C— Explain the differences between and the impact of methods used to calculate population density.	
		PSO-2.C.1 The method used to calculate population density reveals different information about the pressure the population exerts on the land.	pp. 57–60
	Topic 2.2: Consequences of Population Distribution	PSO-2.D— Explain how population distribution and density affect society and the environment.	
		PSO-2.D.1— Population distribution and density affect political, economic, and social processes, including the provision of services such as medical care.	pp. 61–62
		PSO-2.D.2— Population distribution and density affect the environment and natural resources; this is known as carrying capacity.	pp. 62–63
	Topic 2.3: Population Composition	PSO-2.E— Describe elements of population composition used by geographers.	
		PSO-2.E.1— Patterns of age structure and sex ratio vary across different regions and may be mapped and analyzed at different scales.	pp. 64–66
		PSO-2.F— Explain ways that geographers depict and analyze population composition.	
		PSO-2.F.1— Population pyramids are used to assess population growth and decline and to predict markets for goods and services.	p. 65

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 2: Population and Migration Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.		
	IMP-2: Changes in population are due to mortality, fertility, and migration, which are influenced by the interplay of environmental, economic, cultural, and political factors.		
	Topic 2.4: Population Dynamics	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		IMP-2.A —Explain factors that account for contemporary and historical trends in population growth and decline.	
		IMP-2.A.1 —Demographic factors that determine a population's growth and decline are fertility, mortality, and migration.	pp. 77–81
		IMP-2.A.2 —Geographers use the rate of natural increase and population-doubling time to explain population growth and decline.	p. 82
		IMP-2.A.3 —Social, cultural, political, and economic factors influence fertility, mortality, and migration rates.	pp. 79–81
	Topic 2.5: The Demographic Transition Model	IMP-2.B —Explain theories of population growth and decline.	
		IMP-2.B.1 —The demographic transition model can be used to explain population change over time.	pp. 83–84
		IMP-2.B.2 —The epidemiological transition explains causes of changing death rates.	pp. 88–89
	Topic 2.6: Malthusian Theory	IMP-2.B —Explain theories of population growth and decline.	
		IMP-2.B.3 —Malthusian theory and its critiques are used to analyze population change and its consequences.	pp. 90–91
Unit 2: Population and Migration Patterns and Processes	Spatial Process and Societal Change (SPS): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	SPS-2: Changes in population have long- and short-term effects on a place's economy, culture, and politics.		
	Topic 2.7: Population Policies	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-2.A —Explain the intent and effects of various population and immigration policies on population size and composition.	
		SPS-2.A.1 —Types of population policies include those that promote or discourage population growth, such as pronatalist, antinatalist, and immigration policies.	pp. 94–95
	Topic 2.8: Women and Demographic Change	SPS-2.B —Explain how the changing role of females had demographic consequences in different parts of the world.	
		SPS-2.B.1 —Changing social values and access to education, employment, health care, and contraception have reduced fertility rates in most parts of the world.	pp. 96–97
		SPS-2.B.2 —Changing social, economic, and political roles for females have influenced patterns of fertility, mortality, and migration, as illustrated by Ravenstein's laws of migration.	pp. 96–97
		SPS-2.C —Explain the causes and consequences of an aging population.	
	Topic 2.9: Aging Populations	SPS-2.C.1 —Population aging is determined by birth and death rates and life expectancy.	pp. 99–100
		SPS-2.C.2 —An aging population has political, social, and economic consequences, including the dependency ratio.	pp. 100–101

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge		Text Pages
Unit 2: Popula- tion and Migration Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.			
	IMP-2: Changes in population are due to mortality, fertility, and migration, which are influenced by the interplay of environmental, economic, cultural, and political factors.			
	Topic 2.10: Causes of Migration	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE		
		IMP-2.C —Explain how different causal factors encourage migration.		
		IMP-2.C.1 —Migration is commonly divided into push factors and pull factors.	p. 108	
		IMP-2.C.2 —Push/pull factors and intervening opportunities/ obstacles can be cultural, demographic, economic, environmental, or political.	p. 109–111	
	Topic 2.11: Forced and Voluntary Migration	IMP-2.D —Describe types of forced and voluntary migration.		
		IMP-2.D.1 —Forced migrations include slavery and events that produce refugees, internally displaced persons, and asylum seekers.	pp. 115–117	
		IMP-2.D.2 —Types of voluntary migrations include transnational, transhumance, internal, chain, step, guest worker, and rural-to-urban.	pp. 117–119	
	Topic 2.12: Effects of Migration	IMP-2.E —Explain historical and contemporary geographic effects of migration.		
IMP-2.E.1 —Migration has political, economic, and cultural effects.		pp. 120–122		
Unit 3: Cultural Patterns and Processes	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.			
	PSO-3: Cultural practices vary across geographical locations because of physical geography and available resources.			
	Topic 3.1: Introduction to Culture	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE		
		PSO-3.A —Define the characteristics, attitudes, and traits that influence geographers when they study culture.		
		PSO-3.A.1 —Culture comprises the shared practices, technologies, attitudes, and behaviors transmitted by a society.	pp. 132–133	
		PSO-3.A.2 —Cultural traits include such things as food preferences, architecture, and land use.	pp. 135–136	
		PSO-3.A.3 —Cultural relativism and ethnocentrism are different attitudes toward cultural difference.	p. 152	
	Topic 3.2: Cultural Landscapes	PSO-3.B —Describe the characteristics of cultural landscapes.		
		PSO-3.B.1 —Cultural landscapes are combinations of physical features, agricultural and industrial practices, religious and linguistic characteristics, evidence of sequent occupancy, and other expressions of culture including traditional and postmodern architecture and land-use patterns.	pp. 138–140	
		PSO-3.C —Explain how landscape features and land and resource use reflect cultural beliefs and identities.		
		PSO-3.C.1 —Attitudes toward ethnicity and gender, including the role of women in the workforce; ethnic neighborhoods; and indigenous communities and lands help shape the use of space in a given society.	pp. 140–141	
	Topic 3.3: Cultural Patterns	PSO-3.D —Explain patterns and landscapes of language, religion, ethnicity, and gender.		
		PSO-3.D.1 —Regional patterns of language, religion, and ethnicity contribute to a sense of place, enhance placemaking, and shape the global cultural landscape.	pp. 148–150	
		PSO-3.D.2 —Language, ethnicity, and religion are factors in creating centripetal and centrifugal forces.	pp. 150–151	
Unit 3: Cultural Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.			
	IMP-3: The interaction of people contributes to the spread of cultural practices.			
	Topic 3.4: Types of Diffusion	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE		
		IMP-3.A —Define the types of diffusion.		
		IMP-3.A.1 —Relocation and expansion—including contagious, hierarchical, and stimulus expansion—are types of diffusion.	pp. 154–156	

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 3: Cultural Patterns and Processes	Spatial Process and Societal Change (SPS): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	SPS-3: Cultural ideas, practices, and innovations change or disappear over time.		
	Topic 3.5: Historical Causes of Diffusion	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-3.A —Explain how historical processes impact current cultural patterns.	
		SPS-3.A.1 —Interactions between and among cultural traits and larger global forces can lead to new forms of cultural expression; for example, creolization and lingua franca.	pp. 164–167
	Topic 3.6: Contemporary Causes of Diffusion	SPS-3.A.2 —Colonialism, imperialism, and trade helped to shape patterns and practices of culture.	p. 164
		SPS-3.A —Explain how historical processes impact current cultural patterns.	
		SPS-3.A.3 —Cultural ideas and practices are socially constructed and change through both small-scale and large-scale processes such as urbanization and globalization. These processes come to bear on culture through media, technological change, politics, economics, and social relationships.	pp. 168–169
Unit 3: Cultural Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.		
	IMP-3: The interaction of people contributes to the spread of cultural practices.		
	Topic 3.7: Diffusion of Religion and Language	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		IMP-3.B —Explain what factors lead to the diffusion of universalizing and ethnic religions.	
		IMP-3.B.1 —Language families, languages, dialects, world religions, ethnic cultures, and gender roles diffuse from cultural hearths.	pp. 172–174
		IMP-3.B.2 —Diffusion of language families, including Indo-European, and religious patterns and distributions can be visually represented on maps, in charts and toponyms, and in other representations.	pp. 172–175
		IMP-3.B.3 —Religions have distinct places of origin from which they diffused to other locations through different processes. Practices and belief systems impacted how widespread the religion diffused.	pp. 176–179
		IMP-3.B.4 —Universalizing religions, including Christianity, Islam, Buddhism, and Sikhism, are spread through expansion and relocation diffusion.	pp. 176–179
		IMP-3.B.5 —Ethnic religions, including Hinduism and Judaism, are generally found near the hearth, or spread through relocation diffusion.	pp. 176, 178
Unit 3: Cultural Patterns and Processes	Spatial Process and Societal Change (SPS): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	SPS-3: Cultural ideas, practices, and innovations change or disappear over time.		
	Topic 3.8: Effects of Diffusion	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-3.B —Explain how the process of diffusion results in changes to the cultural landscape.	
		SPS-3.B.1 —Acculturation, assimilation, syncretism, and multiculturalism are effects of the diffusion of culture.	pp. 182–184

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 4: Political Patterns and Processes	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	PSO-4: The political organization of space results from historical and current processes, events, and ideas.		
	Topic 4.1: Introduction to Political Geography	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		PSO-4.A— For world political maps: a. Define the different types of political entities. b. Identify a contemporary example of political entities.	
		PSO-4.A.1— Independent states are the primary building blocks of the world political map.	pp. 193–194
		PSO-4.A.2— Types of political entities include nations, nation-states, stateless nations, multinational states, multistate nations, and autonomous and semiautonomous regions, such as American Indian reservations.	pp. 194–197
	Topic 4.2: Political Processes	PSO-4.B— Explain the processes that have shaped contemporary political geography.	
		PSO-4.B.1— The concepts of sovereignty, nation-states, and self-determination shape the contemporary world.	pp. 198–204
		PSO-4.B.2— Colonialism, imperialism, independence movements, and devolution along national lines have influenced contemporary political boundaries.	pp. 199–201
	Topic 4.3: Political Power and Territoriality	PSO-4.C— Describe the concepts of political power and territoriality as used by geographers.	
		PSO-4.C.1— Political power is expressed geographically as control over people, land, and resources, as illustrated by neocolonialism, shatterbelts, and choke points.	pp. 207–209
		PSO-4.C.2— Territoriality is the connection of people, their culture, and their economic systems to the land.	pp. 206–207
Unit 4: Political Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.		
	IMP-4: Political boundaries and divisions of governance, between states and within them, reflect balances of power that have been negotiated or imposed.		
	Topic 4.4: Defining Political Boundaries	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		IMP-4.A— Define types of political boundaries used by geographers.	
		IMP-4.A.1— Types of political boundaries include relic, superimposed, subsequent, antecedent, geometric, and consequent boundaries.	pp. 218–221
	Topic 4.5: The Function of Political Boundaries	IMP-4.B— Explain the nature and function of international and internal boundaries.	
		IMP-4.B.1— Boundaries are defined, delimited, demarcated, and administered to establish limits of sovereignty, but they are often contested.	pp. 223–224
		IMP-4.B.2— Political boundaries often coincide with cultural, national, or economic divisions. However, some boundaries are created by demilitarized zones or policy, such as the Berlin Conference.	pp. 220–221
		IMP-4.B.3— Land and maritime boundaries and international agreements can influence national or regional identity and encourage or discourage international or internal interactions and disputes over resources.	pp. 224–225
		IMP-4.B.4— The United Nations Convention on the Law of the Sea defines the rights and responsibilities of nations in the use of international waters, established territorial seas, and exclusive economic zones.	pp. 228–230
	Topic 4.6: Internal Boundaries	IMP-4.B— Explain the nature and function of international and internal boundaries.	
		IMP-4.B.5— Voting districts, redistricting, and gerrymandering affect election results at various scales.	pp. 231–233
	Topic 4.7: Forms of Governance	IMP-4.C— Define federal and unitary states.	
		IMP-4.C.1— Forms of governance include unitary states and federal states.	pp. 234–235
		IMP-4.D— Explain how federal and unitary states affect spatial organization.	
		IMP-4.D.1— Unitary states tend to have a more top-down, centralized form of governance, while federal states have more locally based, dispersed power centers.	pp. 234–237

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 4: Political Patterns and Processes	Spatial Process and Societal Change (SPS): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	SPS-4: Political, economic, cultural, or technological changes can challenge state sovereignty.		
	Topic 4.8: Defining Devolutionary Factors	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-4.A —Define factors that lead to the devolution of states.	
		SPS-4.A.1 —Factors that can lead to the devolution of states include the division of groups by physical geography, ethnic separatism, ethnic cleansing, terrorism, economic and social problems, and irredentism.	pp. 244–248
	Topic 4.9: Challenges to Sovereignty	SPS-4.B —Explain how political, economic, cultural, and technological changes challenge state sovereignty.	
		SPS-4.B.1 —Devolution occurs when states fragment into autonomous regions; subnational political territorial units, such as those within Spain, Belgium, Canada, and Nigeria; or when states disintegrate, as happened in Sudan and the former Soviet Union.	pp. 249–250
		SPS-4.B.2 —Advances in communication technology have facilitated devolution, supranationalism, and democratization.	pp. 252–254
		SPS-4.B.3 —Global efforts to address transnational and environmental challenges and to create economies of scale, trade agreements, and military alliances help to further supranationalism.	pp. 255–256
		SPS-4.B.4 —Supranational organizations—including the United Nations (UN), North Atlantic Treaty Organization (NATO), European Union (EU), Association of Southeast Asian Nations (ASEAN), Arctic Council, and African Union— can challenge state sovereignty by limiting the economic or political actions of member states.	pp. 252–254
	Topic 4.10: Consequences of Centrifugal and Centripetal Forces	SPS-4.C —Explain how the concepts of centrifugal and centripetal forces apply at the state scale.	
		SPS-4.C.1 —Centrifugal forces may lead to failed states, uneven development, stateless nations, and ethnic nationalist movements.	pp. 258–259
		SPS-4.C.2 —Centripetal forces can lead to ethnonationalism, more equitable infrastructure development, and increased cultural cohesion.	pp. 259–260
Unit 5: Agriculture and Rural Land-Use Patterns and Processes	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	PSO-5: Availability of resources and cultural practices influence agricultural practices and land-use patterns.		
	Topic 5.1: Introduction to Agriculture	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		PSO-5.A —Explain the connection between physical geography and agricultural practices.	
		PSO-5.A.1 —Agricultural practices are influenced by the physical environment and climatic conditions, such as the Mediterranean climate and tropical climates.	pp. 271–272, 278
		PSO-5.A.2 —Intensive farming practices include market gardening, plantation agriculture, and mixed crop/livestock systems.	pp. 273–274, 277
		PSO-5.A.3 —Extensive farming practices include shifting cultivation, nomadic herding, and ranching.	pp. 274–275
	Topic 5.2: Settlement Patterns and Survey Methods	PSO-5.B —Identify different rural settlement patterns and methods of surveying rural settlements.	
		PSO-5.B.1 —Specific agricultural practices shape different rural land-use patterns.	pp. 280–281
		PSO-5.B.2 —Rural settlement patterns are classified as clustered, dispersed, or linear.	p. 279
		PSO-5.B.3 —Rural survey methods include metes and bounds, township and range, and long lot.	pp. 280–281

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 5: Agriculture and Rural Land-Use Patterns and Processes	Spatial Process and Societal Change (SPS): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	SPS-5: Agriculture has changed over time because of cultural diffusion and advances in technology.		
	Topic 5.3: Agricultural Origins and Diffusions	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-5.A—Identify major centers of domestication of plants and animals.	
		SPS-5.A.1—Early hearths of domestication of plants and animals arose in the Fertile Crescent and several other regions of the world, including the Indus River Valley, Southeast Asia, and Central America.	pp. 284–285
		SPS-5.B—Explain how plants and animals diffused globally.	
		SPS-5.B.1—Patterns of diffusion, such as the Columbian Exchange and the agricultural revolutions, resulted in the global spread of various plants and animals.	pp. 285–286
	Topic 5.4: The Second Agricultural Revolution	SPS-5.C—Explain the advances and impacts of the second agricultural revolution.	
		SPS-5.C.1—New technology and increased food production in the second agricultural revolution led to better diets, longer life expectancies, and more people available for work in factories.	pp. 293–295
	Topic 5.5: The Green Revolution	SPS-5.D—Explain the consequences of the Green Revolution on food supply and the environment in the developing world.	
		SPS-5.D.1—The Green Revolution was characterized in agriculture by the use of high-yield seeds, increased use of chemicals, and mechanized farming.	pp. 296–298
SPS-5.D.2—The Green Revolution had positive and negative consequences for both human populations and the environment.		pp. 298–301	
Unit 5: Agriculture and Rural Land-Use Patterns and Processes	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	PSO-5: Availability of resources and cultural practices influence agricultural practices and land- use patterns.		
	Topic 5.6: Agricultural Production Regions	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		PSO-5.C—Explain how economic forces influence agricultural practices.	
		PSO-5.C.1—Agricultural production regions are defined by the extent to which they reflect subsistence or commercial practices (monocropping or monoculture).	pp. 308–310
		PSO-5.C.2—Intensive and extensive farming practices are determined in part by land costs (bid-rent theory).	p. 308
	Topic 5.7: Spatial Organization of Agriculture	PSO-5.C—Explain how economic forces influence agricultural practices.	
		PSO-5.C.3—Large-scale commercial agricultural operations are replacing small family farms.	pp. 311–312
		PSO-5.C.4—Complex commodity chains link production and consumption of agricultural products.	pp. 312–313
		PSO-5.C.5—Technology has increased economies of scale in the agricultural sector and the carrying capacity of the land.	p. 314
	Topic 5.8: Von Thünen Model	PSO-5.D—Describe how the von Thünen model is used to explain patterns of agricultural production at various scales.	
		PSO-5.D.1—Von Thünen's model helps to explain rural land use by emphasizing the importance of transportation costs associated with distance from the market; however, regions of specialty farming do not always conform to von Thünen's concentric rings.	pp. 315–320
	Topic 5.9: The Global System of Agriculture	PSO-5.E—Explain the interdependence among regions of agricultural production and consumption.	
		PSO-5.E.1—Food and other agricultural products are part of a global supply chain.	pp. 322–323
		PSO-5.E.2—Some countries have become highly dependent on one or more export commodities.	pp. 322–323
		PSO-5.E.3—The main elements of global food distribution networks are affected by political relationships, infrastructure, and patterns of world trade.	pp. 323–325

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 5: Agriculture and Rural Land-Use Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.		
	IMP-5: Agricultural production and consumption patterns vary in different locations, presenting different environmental, social, economic, and cultural opportunities and challenges.		
	Topic 5.10: Consequences of Agricultural Practices	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		IMP-5.A— Explain how agricultural practices have environmental and societal consequences.	
		IMP-5.A.1— Environmental effects of agricultural land use include pollution, land cover change, desertification, soil salinization, and conservation efforts.	pp. 334–336
		IMP-5.A.2— Agricultural practices—including slash and burn, terraces, irrigation, deforestation, draining wetlands, shifting cultivation, and pastoral nomadism—alter the landscape.	pp. 336–338
		IMP-5.A.3— Societal effects of agricultural practices include changing diets, role of women in agricultural production, and economic purpose.	pp. 340–342
	Topic 5.11: Challenges of Contemporary Agriculture	IMP-5.B— Explain challenges and debates related to the changing nature of contemporary agriculture and food-production practices.	
		IMP-5.B.1— Agricultural innovations such as biotechnology, genetically modified organisms, and aquaculture have been accompanied by debates over sustainability, soil and water usage, reductions in biodiversity, and extensive fertilizer and pesticide use.	pp. 343–347
		IMP-5.B.2— Patterns of food production and consumption are influenced by movements relating to individual food choice, such as urban farming, community-supported agriculture (CSA), organic farming, value-added specialty crops, fair trade, local-food movements, and dietary shifts.	pp. 347–350
		IMP-5.B.3— Challenges of feeding a global population include lack of food access, as in cases of food insecurity and food deserts, problems with distribution systems; adverse weather; and land use lost to suburbanization.	pp. 350–353
		IMP-5.B.4— The location of food-processing facilities and markets, economies of scale, distribution systems, and government policies all have economic effects on food-production practices.	pp. 353–355
	Topic 5.12: Women in Agriculture	IMP-5.C— Explain geographic variations in female roles in food production and consumption.	
		IMP-5.C.1— The role of females in food production, distribution, and consumption varies in many places depending on the type of production involved.	pp. 356–358

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 6: Cities and Urban Land-Use Patterns and Processes	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	PSO-6: The presence and growth of cities vary across geographical locations because of physical geography and resources.		
	Topic 6.1: The Origin and Influences of Urbanization	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		PSO-6.A— Explain the processes that initiate and drive urbanization and suburbanization.	
		PSO-6.A.1— Site and situation influence the origin, function, and growth of cities.	pp. 368–369
		PSO-6.A.2— Changes in transportation and communication, population growth, migration, economic development, and government policies influence urbanization.	pp. 371–374
	Topic 6.2: Cities Across the World	PSO-6.A— Explain the processes that initiate and drive urbanization and suburbanization.	
		PSO-6.A.3— Megacities and metacities are distinct spatial outcomes of urbanization increasingly located in countries of the periphery and semiperiphery.	pp. 377–379
		PSO-6.A.4— Processes of suburbanization, sprawl, and decentralization have created new land-use forms—including edge cities, exurbs, and boomburbs—and new challenges.	pp. 375–377
	Topic 6.3: Cities and Globalization	PSO-6.B— Explain how cities embody processes of globalization.	
		PSO-6.B.1— World cities function at the top of the world's urban hierarchy and drive globalization.	pp. 380–381
		PSO-6.B.2— Cities are connected globally by networks and linkages and mediate global processes.	pp. 380–381
	Topic 6.4: The Size and Distribution of Cities	PSO-6.C— Identify the different urban concepts such as hierarchy, interdependence, relative size, and spacing that are useful for explaining the distribution, size, and interaction of cities.	
		PSO-6.C.1— Principles that are useful for explaining the distribution and size of cities include rank-size rule, the primate city, gravity, and Christaller's central place theory.	pp. 382–386
	Topic 6.5: The Internal Structure of Cities	PSO-6.D— Explain the internal structure of cities using various models and theories.	
		PSO-6.D.1— Models and theories that are useful for explaining internal structures of cities include the Burgess concentric- zone model, the Hoyt sector model, the Harris and Ullman multiple-nuclei model, the galactic city model, bid-rent theory, and urban models drawn from Latin America, Southeast Asia, and Africa.	pp. 395–401

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 6: Cities and Urban Land-Use Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.		
	MP-6: The attitudes and values of a population, as well as the balance of power within that population, are reflected in the built landscape.		
	Topic 6.6: Density and Land Use	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		IMP-6.A —Explain how low-, medium-, and high-density housing characteristics represent different patterns of residential land use.	
		IMP-6.A.1 —Residential buildings and patterns of land use reflect and shape the city's culture, technological capabilities, cycles of development, and infilling.	pp. 403–405
	Topic 6.7: Infrastructure	IMP-6.B —Explain how a city's infrastructure relates to local politics, society, and the environment.	
		IMP-6.B.1 —The location and quality of a city's infrastructure directly affects its spatial patterns of economic and social development.	pp. 406–409
	Topic 6.8: Urban Sustainability	IMP-6.C —Identify the different urban design initiatives and practices.	
		IMP-6.C.1 —Sustainable design initiatives and zoning practices include mixed land use, walkability, transportation-oriented development, and smart-growth policies, including New Urbanism, greenbelts, and slow-growth cities.	pp. 417–420
		IMP-6.D —Explain the effects of different urban design initiatives and practices.	
		IMP-6.D.1 —Praise for urban design initiatives includes the reduction of sprawl, improved walkability, and transportation, improved and diverse housing options, improved livability and promotion of sustainable options. Criticisms include increased housing costs, possible de facto segregation, and the potential loss of historical or place character.	pp. 417–418
	Topic 6.9: Urban Data	IMP-6.E —Explain how qualitative and quantitative data are used to show the causes and effects of geographic change within urban areas.	
		IMP-6.E.1 —Quantitative data from census and survey data provide information about changes in population composition and size in urban areas.	pp. 422–423
		IMP-6.E.2 —Qualitative data from field studies and narratives provide information about individual attitudes toward urban change.	pp. 423–424

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 6: Cities and Urban Land-Use Patterns and Processes	Spatial Process and Societal Change (SPS): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	SPS-6: Urban areas face unique economic, political, cultural, and environmental challenges.		
	Topic 6.10: Challenges of Urban Changes	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-6.A— Explain causes and effects of geographic change within urban areas.	
		SPS-6.A.1— As urban populations move within a city, economic and social challenges result, including: issues related to housing and housing discrimination such as redlining, blockbusting, and affordability; access to services; rising crime; environmental injustice; and the growth of disamenity zones or zones of abandonment.	pp. 425–427
		SPS-6.A.2— Squatter settlements and conflicts over land tenure within large cities have increased.	pp. 429–430
		SPS-6.A.3— Responses to economic and social challenges in urban areas can include inclusionary zoning and local food movements.	pp. 427, 431
		SPS-6.A.4— Urban renewal and gentrification have both positive and negative consequences.	pp. 428–430
		SPS-6.A.5— Functional and geographic fragmentation of governments—the way government agencies and institutions are dispersed between state, county, city, and neighborhood levels—presents challenges in addressing urban issues.	pp. 431–432
	Topic 6.11: Challenges of Urban Sustainability	SPS-6.B— Describe the effectiveness of different attempts to address urban sustainability challenges.	
		SPS-6.B.1— Challenges to urban sustainability include suburban sprawl, sanitation, climate change, air and water quality, the large ecological footprint of cities, and energy use.	pp. 431–435
		SPS-6.B.2— Responses to urban sustainability challenges can include regional planning efforts, remediation and redevelopment of brownfields, establishment of urban growth boundaries, and farmland protection policies.	pp. 435–436

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 7: Industrial and Economic Development Patterns and Processes	Spatial Process and Societal Change (SPS): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	SPS-7: Industrialization, past and present, has facilitated improvements in standards of living, but it has also contributed to geographically uneven development.		
	Topic 7.1: The Industrial Revolution	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		SPS-7.A —Explain how the Industrial Revolution facilitated the growth and diffusion of industrialization.	
		SPS-7.A.1 —Industrialization began as a result of new technologies and was facilitated by the availability of natural resources.	p. 447
		SPS-7.A.2 —As industrialization spread it caused food supplies to increase and populations to grow; it allowed workers to seek new industrial jobs in the cities and changed class structures.	pp. 448–449
		SPS-7.A.3 —Investors in industry sought out more raw materials and new markets, a factor that contributed to the rise of colonialism and imperialism.	p. 450
	Topic 7.2: Economic Sectors and Patterns	SPS-7.B —Explain the spatial patterns of industrial production and development.	
		SPS-7.B.1 —The different economic sectors—including primary, secondary, tertiary, quaternary, and quinary—are characterized by distinct development patterns.	pp. 452–454
		SPS-7.B.2 —Labor, transportation (including shipping containers), the break-of-bulk point, least cost theory, markets, and resources influence the location of manufacturing such as core, semiperiphery, and periphery locations.	pp. 455–458
	Topic 7.3: Measures of Development	SPS-7.C —Describe social and economic measures of development.	
		SPS-7.C.1 —Measures of social and economic development include Gross Domestic Product (GDP); Gross National Product (GNP); and Gross National Income (GNI) per capita; sectoral structure of an economy, both formal and informal; income distribution; fertility rates; infant mortality rates; access to health care; use of fossil fuels and renewable energy; and literacy rates.	pp. 462–466
		SPS-7.C.2 —Measures of gender inequality, such as the Gender Inequality Index (GII), include reproductive health, indices of empowerment, and labor-market participation.	pp. 468–469
		SPS-7.C.3 —The Human Development Index (HDI) is a composite measure used to show spatial variation among states in levels of development.	pp. 469–470
	Topic 7.4: Women and Economic Development	SPS-7.D —Explain how and to what extent changes in economic development have contributed to gender parity.	
		SPS-7.D.1 —The roles of women change as countries develop economically.	pp. 471–472
		SPS-7.D.2 —Although there are more women in the workforce, they do not have equity in wages or employment opportunities.	pp. 471–472
		SPS-7.D.3 —Microloans have provided opportunities for women to create small local businesses, which have improved standards of living.	p. 472
	Topic 7.5: Theories of Development	SPS-7.E —Explain different theories of economic and social development.	
		SPS-7.E.1 —Different theories, such as Rostow's Stages of Economic Growth, Wallerstein's World System Theory, dependency theory, and commodity dependence, help explain spatial variations in development.	pp. 479–484

Unit / Period	Topic	Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge	Text Pages
Unit 7: Industrial and Economic Development Patterns and Processes	Patterns and Spatial Organization (PSO): Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.		
	PSO-7: Economic and social development happen at different times and rates in different places.		
	Topic 7.6: Trade and the World Economy	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		PSO-7.A —Explain causes and geographic consequences of recent economic changes such as the increase in international trade, deindustrialization, and growing interdependence in the world economy.	
		PSO-7.A.1 —Complementarity and comparative advantage establish the basis for trade.	pp. 485–486
		PSO-7.A.2 —Neoliberal policies, including free trade agreements, have created new organizations, spatial connections, and trade relationships, such as the EU, World Trade Organization (WTO), Mercosur, and OPEC, that foster greater globalization.	pp. 486–487
		PSO-7.A.3 —Government initiatives at all scales may affect economic development, including tariffs.	pp. 486–488
		PSO-7.A.4 —Global financial crises (e.g., debt crises), international lending agencies (e.g., the International Monetary Fund), and strategies of development (e.g., microlending) demonstrate how different economies have become more closely connected, even interdependent.	p. 489
	Topic 7.7: Changes as a result of the World Economy	PSO-7.A —Explain causes and geographic consequences of recent economic changes such as the increase in international trade, deindustrialization, and growing interdependence in the world economy.	
		PSO-7.A.5 —Outsourcing and economic restructuring have led to a decline in jobs in core regions and an increase in jobs in newly industrialized countries.	pp. 496–498
		PSO-7.A.6 —In countries outside the core, the growth of industry has resulted in the creation of new manufacturing zones—including special economic zones, free-trade zones, and export processing zones—and the emergence of an international division of labor in which developing countries have lower-paying jobs.	pp. 497–498
		PSO-7.A.7 —The contemporary economic landscape has been transformed by post-Fordist methods of production, multiplier effects, economies of scale, agglomeration, just-in-time delivery, the emergence of service sectors, high technology industries, and growth poles.	pp. 501–503
Unit 7: Industrial and Economic Development Patterns and Processes	Impacts and Interactions (IMP): Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.		
	IMP-7: Environmental problems stemming from industrialization may be remedied through sustainable development strategies.		
	Topic 7.8: Sustainable Development	LEARNING OBJECTIVES AND ESSENTIAL KNOWLEDGE	
		IMP-7.A —Explain how sustainability principles relate to and impact industrialization and spatial development.	
		IMP-7.A.1 —Sustainable development policies attempt to remedy problems stemming from natural resource depletion, mass consumption, the effects of pollution, and the impact of climate change.	pp. 505–507
		IMP-7.A.2 —Ecotourism is tourism based in natural environments—often environments that are threatened by looming industrialization or development—that frequently helps to protect the environment in question while also providing jobs for the local population.	p. 508
		IMP-7.A.3 —The UN's Sustainable Development Goals help measure progress in development, such as small-scale finance and public transportation projects.	pp. 508–510

Correlation to the Course Skills

Code	Category	Text Pages
1	Concepts and Processes: Analyze geographic theories, approaches, concepts, processes, or models in theoretical and applied contexts.	
1.A	Describe geographic concepts, processes, models, and theories.	pp. 27, #3; 50, #5; 72, #5; 127, #7; 160, #2; 161, #5; 213, #1; 264, #1; 266, #6; 289, #1, #2, #3; 305, #6, 362, #3; 390, #2; 480, #4
1.B	Explain geographic concepts, processes, models, and theories.	pp. 27, #4; 49, #2, #3; 105, #4; 126, #4; 126, #6; 187, #1, #2; 189, #7; 188, #5, #6; 215, #7; 265, #3, #4, #5; 304, #2, #4; 305, #7; 330, #3; 362, #4; 390, #4; 413, #2; 475, #2, #3; 480, #5; 514, #2, #4
1.C	Compare geographic concepts, processes, models, and theories.	pp. 105, #5; 125, #2
1.D	Describe a relevant geographic concept, process, model, or theory in a specified context.	pp. 161, #4; 161, #6; 187, #3; 239, #2; 241, #5, #6, #7; 266, #7; 290, #5, #7; 362, #6, 390, #3; 390, #5; 440, #4, #6; 480, #6; 492, #1; 493, #6; 493, #6; 514, #5, #7
1.E	Explain the strengths, weaknesses, and limitations of different geographic models and theories in a specified context.	p. 304, #1
2	Spatial Relationships: Analyze geographic patterns, relationships, and outcomes in applied contexts.	
2.A	Describe spatial patterns, networks, and relationships.	pp. 49, #3; 161, #7; 329, #1, 362, #5
2.B	Explain spatial relationships in a specified context or region of the world, using geographic concepts, processes, models, or theories.	pp. 289, #4; 304, #3; 331, #5, #6, #7; 413, #3, #4; 492, #3; 493, #4, #5
2.C	Explain a likely outcome in a geographic scenario using geographic concepts, processes, models, or theories.	pp. 126, #3; 439, #2; 440, #3, #5; 480, #7
2.D	Explain the significance of geographic similarities and differences among different locations and/or at different times.	p. 413, #5
2.E	Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects in different contexts and regions of the world.	p. 414, #7
3	Data Analysis: Analyze and interpret quantitative geographic data represented in maps, tables, charts, graphs, satellite images, and infographics.	
3.A	A Identify the different types of data presented in maps and in quantitative and geospatial data.	pp. 27, #5; 214, #2; #4; 240, #3; 391, #6; 493, #7
3.B	Describe spatial patterns presented in maps and in quantitative and geospatial data.	pp. 71, #2; 104, #1; 105, #6; 514, #3
3.C	Explain patterns and trends in maps and in quantitative and geospatial data to draw conclusions.	pp. 73, #7; 214, #3; 305, #5; 389, #1; 391, #7; 441, #7; 514, #6
3.D	Compare patterns and trends in maps and in quantitative and geospatial data to draw conclusions.	pp. 72, #3, #4; 104, #2; 106, #7; 439, #1; 475, #1
3.E	Explain what maps or data imply or illustrate about geographic principles, processes, and outcomes.	pp. 26, #1; 28, #6, #7; 51, #6; 71, #1; 73, #6; 105, #3; 188, #4; 513, #1
3.F	Explain possible limitations of the data provided.	p. 26, #2
4	Source Analysis: Analyze and interpret qualitative geographic information represented in maps, images (e.g., satellite, photographs, cartoons), and landscapes.	
4.A	Identify the different types of information presented in visual sources.	pp. 50, #4; 160, #3; 215, #5, #6; 239, #1; 290, #6; 361, #1; 412, #1
4.B	Describe the spatial patterns presented in visual sources.	pp. 329, #2; 414, #6
4.C	Explain patterns and trends in visual sources to draw conclusions.	pp. 264, #1; 363, #7
4.D	Compare patterns and trends in sources to draw conclusions.	pp. 240, #4; 330, #4
4.E	Explain how maps, images, and landscapes illustrate or relate to geographic principles, processes, and outcomes.	pp. 125, #1; 126, #5; 126, #5; 159, #1; 361, #2
4.F	Explain possible limitations of visual sources provided.	

Code	Category	Text Pages
5	Scale Analysis: Analyze geographic theories, approaches, concepts, processes, and models across geographic scales to explain spatial relationships.	
5.A	A Identify the scales of analysis presented by maps, quantitative and geospatial data, images, and landscapes.	p. 51, #7
5.B	Explain spatial relationships across various geographic scales using geographic concepts, processes, models, or theories.	pp. 312, #7; 523, #12
5.C	Compare geographic characteristics and processes at various scales.	p. 529, #28
5.D	Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects across various geographic scales.	

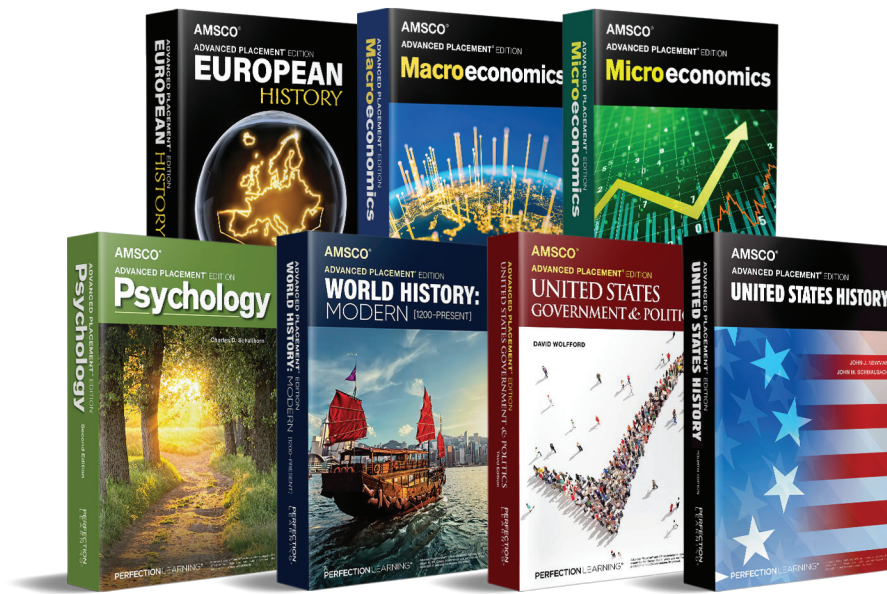
Correlation to the Big Ideas

Big Ideas	Text Pages
BIG IDEA 1: PATTERNS AND SPATIAL ORGANIZATION (PSO)	
Spatial patterns and organization of human society are arranged according to political, historical, cultural, and economic factors.	pp. 31–40; 77–84; 88–91; 108–111; 115–122; 165–156; 172–179; 218–221; 223–225; 228–237; 334–338; 340–358; 403–409; 417–420; 422–424; 505–510
BIG IDEA 2: IMPACTS AND INTERACTIONS (IMP)	
Complex relationships of cause and effect exist among people, their environments, and historical and contemporary actions.	pp. 9–16; 18–22; 55–66; 132–133; 135–136; 138–141; 148–152; 193–204; 207–209; 271–275; 227–281; 285–286; 308–320; 322–325; 368–386; 395–401; 427–436; 486–489; 496–498; 501–503
BIG IDEA 3: SPATIAL PROCESS AND SOCIETAL CHANGE (SPS)	
A spatial perspective allows for a focus on the ways phenomena are related to one another in particular places, which in turn allows for the examination of human organization and its environmental consequences.	pp. 43–46; 94–97; 99–101; 164–170; 182–184; 244–250; 252–256; 250–260; 284–286; 293–301; 352–353; 425–432; 447–450; 455–458; 462–466; 468–472; 479–484

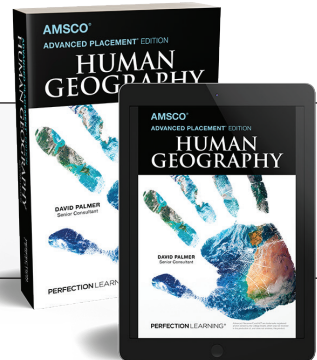
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